

ALL HANDS



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DECEMBER 1960





ALL HANDS

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• **FRONT COVER: ROUGH RIDERS**—Cruisemen on board Second Fleet Flagship, USS Northampton (CLC 1), find the going on the rugged side as they cruise through North Atlantic waters on one of their varied assignments.

• **AT LEFT: FULL 'HOUSE'**—Constellation (CVA 64), Navy's sixth Forrestal class carrier, overflows her drydock at New York Naval Shipyard as the carrier's large flight deck takes shape. Constellation will be completed in May.

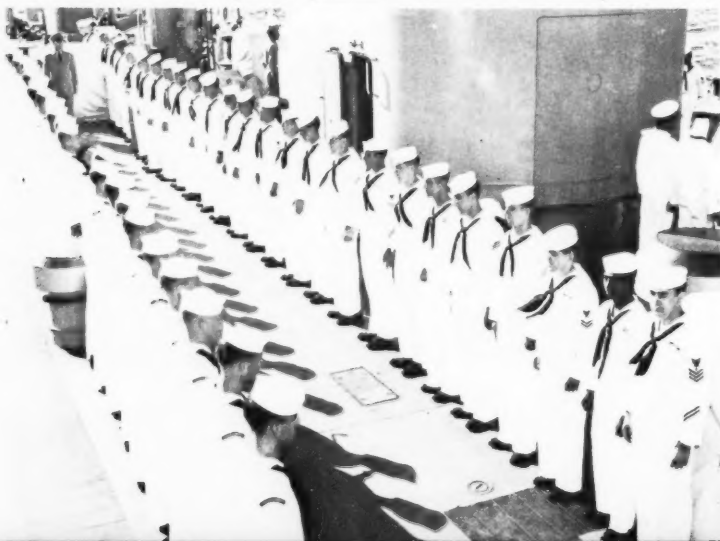
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KEEPING UP—USS Boston (CAG 1) proves she belongs to the missile age as she fires a Terrier from stern launcher.



SALTY CREWS—Starboard watch of USS Boston pose for photo in 1888. Below: Cruisemen line up for inspection on board USS Northampton (CLC 1).



CruisersA

NOW UNDER CONSTRUCTION at a shipyard in the northeastern part of the country is a ship that—well, her name is *Long Beach*, which is, of course, the name of a port in the southwestern part of the country. But that's not the point.

On 14 Jul 1959, she became America's first nuclear-powered surface ship to be launched. And she is the first ship designed and built from the keel up as a U.S. cruiser within the past 15 years. Her armament will consist of *Talos*, *Terrier* and *Asroc* missile batteries.

Missiles on cruisers are nothing new; they date back to 1955. But the all-missile feature of *Long Beach*, and of three other former heavy cruisers now under conversion, points up a certain quality about cruisers. Through the scores of years they've been part of the Navy they have always kept pace with technological and tactical developments.

Not long before World War II—when naval warfare was viewed as one line of battleships slamming away at another line of battleships—cruisers were considered scouts and fast wing ships. First they were to locate the enemy fleet. Then they were to deliver blows in support of the BBs and dash to any part of the battleline that needed help. They were also to break up an attack by enemy light forces.

As events turned out, World War II sea fighting wasn't like that at all.

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ON DUTY—USS *Newport News* (CA 148) framed by sister ship's guns. Rt: *Rochester* (CA 124) blasts enemy in Korea.

ersAre Better Than Ever

Though there were a few instances of cruiser against battleship, most cruiser surface actions consisted of gun battles with enemy cruisers and destroyers. They played two other equally important roles. They provided close fire support during landing operations, and they offered anti-aircraft support to carrier task forces.

AS FOR THE CRUISER'S role in the Navy of today and the immediate future, it is seen as that of a ship able to match the speed and endurance of the attack carrier in all weather and in all states of the sea. It is one in which the cruiser is equipped not only to detect and track enemy aircraft, but also to control friendly interceptor aircraft and detect and destroy enemy submarines.

One top expert on the subject points out that in addition to this role there must be certain "coordination" facilities—namely, the facilities afforded the cruiser CO or cruiser division commander to coordinate anti-air warfare—and to do so at a good distance from the friendly naval forces under attack. The units to be coordinated would be frigates, destroyers, destroyer escorts—and aircraft.

In other words, the cruiser's role is one in which the cruiser spearheads the *defense* of the striking force. The carrier and its strike aircraft, would, by contrast, then be

left free to concentrate on the *offense*—making the attack. In Fleet exercises today cruisers are already practicing such control and coordination.

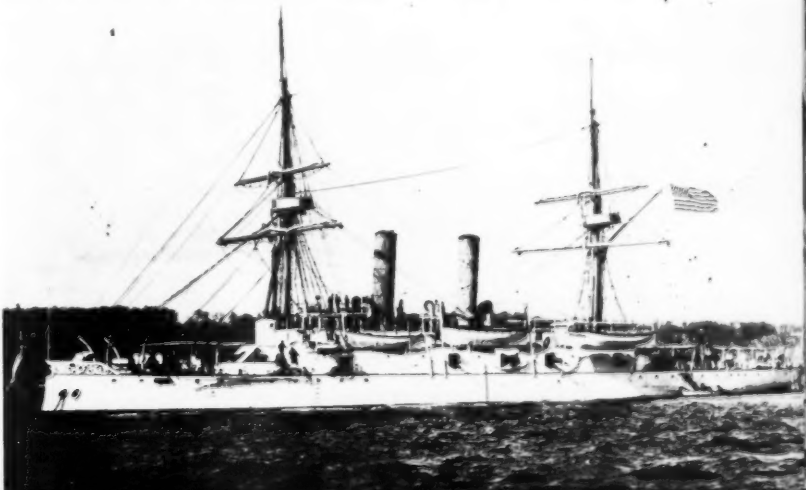
As they become more and more missile rigged, another role opens up for cruisers. It is one that sees them on lone-wolf missions. Cruising far, fast and alone, they would launch their missiles against enemy forces from little-expected positions.

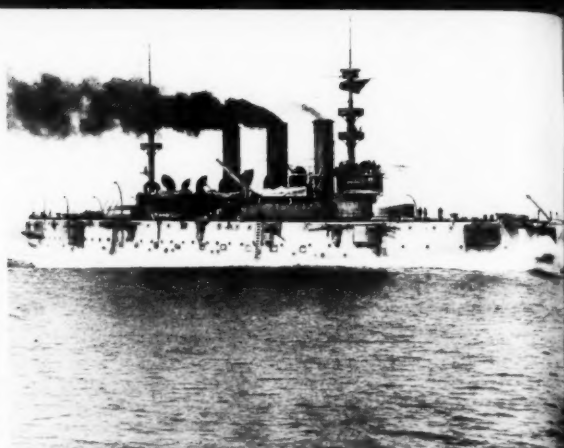
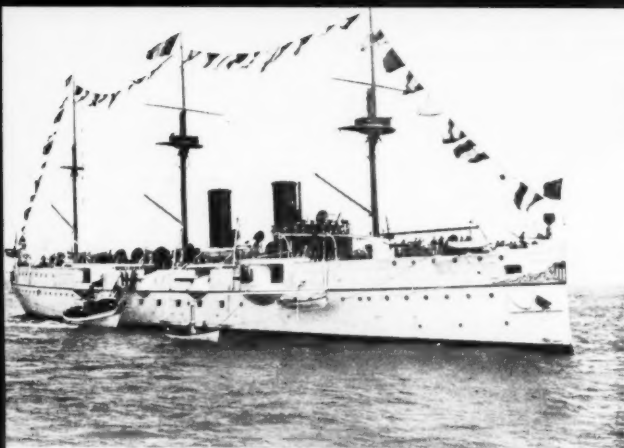
CRUISERS HAVE long been flagships. They are well fitted for the job not only by their high speeds and long cruising ranges but also by their ability to accommodate the additional men and gear that invariably accompany the flag officer.

For several years back in the 1920s *USS Seattle* was flagship of the United States Fleet. In the late 1930s cruisers were flagships for the Asiatic Fleet (*Augusta*); Battle Force Destroyers (*Concord*); Destroyer Flotilla One (*Raleigh*); U.S. Fleet Scouting Force (*Indianapolis*); Scouting Force Cruisers (*Chicago*); Scouting Force Aircraft (*Memphis*) and U.S. Fleet Submarine Force (*Richmond*). *Omaha* was in the Med area as flagship of a special force (Squadron 40-T) on duty in Spanish waters.

The cruiser-flagship rundown today is: First (Pacific) Fleet—*Helena* (CA-75); Second (Atlantic) Fleet—*Northampton* (CLC 1); Sixth (Mediterranean) Fleet—*Des Moines*

'STEEL CRUISER' *USS Boston*, authorized in 1883, beginning of modern CAs.





OLD TIMERS—Unarmored cruisers like *USS San Francisco* preceded armored cruisers. *Rt: USS New York* led off.

(CA 134); Seventh (Far East) Fleet—*St. Paul* (CA 73).

Basic "command" unit of the cruiser is the division. (There is no such thing as a cruiser squadron or a cruiser flotilla.) The Navy's active service cruisers are split among five divisions, with the exception of the Seventh Fleet flagship, which remains unassigned. The PACFLT divisions are CRDIV One and CRDIV Three, which are units of the PACFLT Cruiser-Destroyer Force. In the Atlantic Fleet are CRDIV Two, Four and Six. They are units of LANTFLT's Cruiser Force—which had been BATCRULANT when battleships were still in the active Fleet.

ONE OF THE THREE SHIPS of CRDIV Six is *USS Northampton*. Flagship of the Second Fleet, she is the

SUNNY SIDE—Heavy cruiser *USS Des Moines* (CA 134) moors pierside at Toulon, France, near French cruiser while serving as flagship for the Sixth Fleet.



only one of her kind—a tactical command ship. *Northampton* is a sea-going headquarters during carrier and amphibious operations. She is not a true cruiser, but had her keel laid (in 1944) as a heavy cruiser of the *Oregon City* class and, after lying dormant for a number of years, was then given increased communications, radar, and headquarters equipment and spaces in place of the usual eight-inch turrets.

In active service today are 16 cruisers, about evenly divided between the Atlantic and Pacific Fleets. Seven of these are CAs (heavy cruisers). Two are CAGs (guided missile heavy cruisers). Six are CLGs (guided missile light cruisers). There is also one CLC, which is a tactical command ship.

Of the seven CAs, *Des Moines*

(CA 134) and *Newport News* (CA 148) are *Salem* class ships. There are four of the *Baltimore* class, and one of the *Oregon City* class, namely *Rochester*.

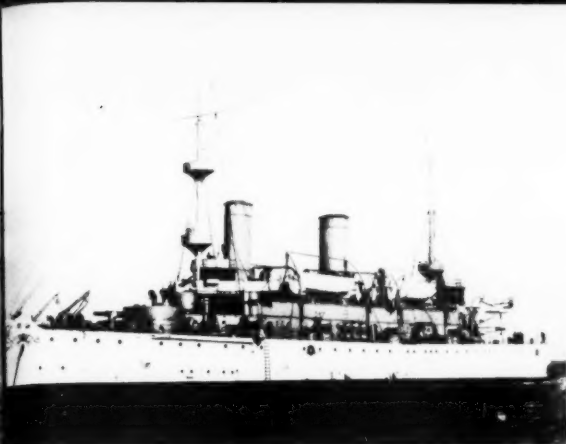
The "*Salems*" are our largest CAs and the largest "true" cruisers in the world. They weigh in at 21,500 tons (full load), are 716½ feet long and mount nine eight-inch rapid fire rifles in two forward turrets and one turret aft. (Russia's famed *Sverdlov*-class cruisers are rated at 19,200 tons (full load); 689 feet in length. They have 12 six-inch rifles in four turrets.)

"*Baltimore*s" are rated at 17,200 tons; 673½-ft. length. With a 71-foot maximum beam they have a speed in excess of 33 knots. Two carry *Regulus* missiles, though they are not considered missile cruisers. *USS Rochester* (CA 124), with a single stack rather than a pair of stacks, is a "modified *Baltimore*," about 300 tons heavier than the others.

The Navy's two CAGs are *Boston* (CAG 1) and *Canberra* (CAG 2). Converted *Baltimore*s, they fire intermediate-range, beam-riding *Terrier* missiles. These are carried in twin launchers mounted tandem fashion about where the after eight-inch turret had been located.

GUIDED MISSILE LIGHT CRUISERS, of which there are six, are conversions from *Cleveland* class conventional "lights." Their tonnage runs about 14,600 and their length is 610 feet. In addition to five-inch and six-inch rifles, they mount twin *Terrier* or *Talos* launchers. *Galveston* (CLG 3), *Little Rock* (CLG 4) and *Oklahoma City* (CLG 5) carry the 3000-lb., ramjet-powered surface-to-air *Talos* missile. *Providence* (CLG 6),

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PAST AND FUTURE—USS *Olympia* is representative of the protected cruisers. Rt: First CG(N) will soon join the Fleet.

Springfield (CLG 7) and *Topeka* (CLG 8) carry *Terriers*. All missile launchers are mounted in the after part of the ship.

Four CLGs were, during their conversion from CLs, refitted as flagships. Their bridge and forward superstructure areas were revamped to make more flag and communications spaces.

For many years the main distinction between U.S. cruiser types has been *light* and *heavy*—the former with six-inch rifles and the latter with eight-inch rifles. Supposedly, weight had nothing to do with the matter, though it usually turned out that the heavy cruiser had thicker armor and was a lot heavier than the light cruiser. These terms, by the way, date back to a naval armament conference of the early 1920s.

NOW UNDER CONVERSION at naval shipyards are two *Baltimore* class and one *Oregon City* class ex-heavyweights that foretell the end of the light-heavy division. Their designation is simply guided missile cruiser (CG). *Albany* (CG 10), *Chicago* (CG 11) and *Columbus* (CG 12) are their names and numbers.

Albany is the lead ship of this trio. She will have sonar and *Asroc*—the antisubmarine rocket system. She will have "macks," which, as the word suggests, are combination stacks and masts. And, far in advance of the CLGs with their single twin-launchers, she will mount four launchers. Twin *Talos* launchers will be mounted both fore and aft; while amidships there will be a pair of *Tartar* single launchers.

In the Reserve Fleets are 28 cruisers. Of these, eight are heavies, 17 light, and three antiaircraft light cruisers (CLAAs).

The CLAAs (now in Reserve, out of commission) check in at 8000 tons and at 541 feet in length. Six five-inch twin mounts are their main weapons.

CRUISERS ARE GREAT "show the flag" ships. They have the ability to cruise great distances without refueling. They can stow a lot of provisions. And they are exceptionally impressive looking ships. It's not just that they have good lines, but they are mighty potent looking.

Consider the case of *Canberra*. In October she completed an extended circuit of the globe in which she served with each of the Navy's active Fleets within one year. Among the more colorful ports visited were Apra Harbor, Guam; Hong Kong; Subic Bay, P.I.; Singapore; Cochin,

India; Karachi, Pakistan; Beppu, Japan; and Sydney and Melbourne, Australia. She received more than 60,000 visitors.

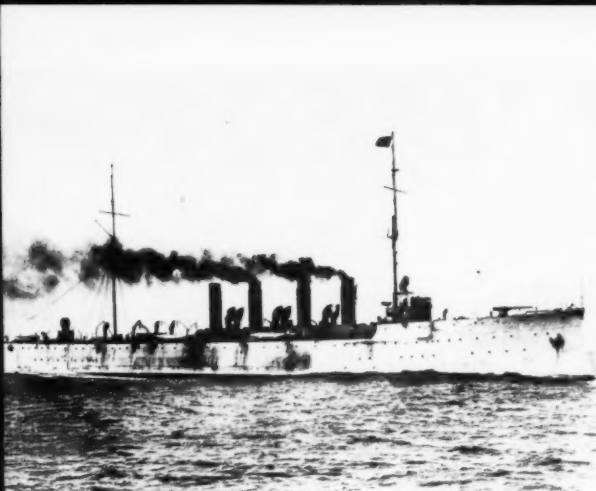
No other type so well portrays how ships evolve over the years. In our nation's early history the terms warship and frigate were almost the same. When steam power arrived, frigates came to be known as steam frigates or screw frigates.

In 1883 work began on three ships that marked the beginning not only of the modern Navy but also of the Navy's modern cruisers. This work was authorized by an Act of Congress dated 3 Mar 1883, a key date for the cruiser Navy.

Atlanta, *Boston* and *Chicago* were the three ships. The first two, completed at the New York Navy Yard, displaced 3189 tons and were 283

MORE MISSILES—Some heavy cruisers carry the *Regulus I*, surface-to-surface guided missile even though they are not classified as guided missile cruisers.





FOUR STACKER USS Chester (CL 1) was light cruiser of 1908 vintage. Rt: USS Pensacola (CA 24) photographed in '35.

feet in length. *Chicago*, built at Chester, Pa., had a 4500-ton displacement and a length of 342 feet. "Steam cruising vessels of war" and "steel cruiser" were terms used in the legislation behind these ships.

Though not very large and though they still carried masts, yards, sails and other wind-ship rigging, they were a great improvement over what the Navy then had. And they pointed the way to further developments.

By mid-1895, 12 more cruisers had gone into service. Eleven of these, like the "A, B, C ships," were considered *protected cruisers*, because of their protective armor decks.

A representative protected cruiser was *Uss Olympia*, Dewey's flagship at Manila Bay. This 5500 ton ship had a 20-knot speed. She mounted four eight-inch and 10 five-inch rifles; 14 six-pounders and six one-

pounders; plus six torpedo tubes. Her deck armor was 4¾ inches at the thickest.

FIRST CRUISER of this era that was not a protected cruiser was *Uss New York*. She led off the Navy's *armored cruisers*, a type of ship even better known than the protected cruiser. The armored cruiser had side armor as well as deck armor.

Following *New York* came *Brooklyn*. An 8200-tonner commissioned in 1896, she had a three-inch-thick side belt. Steam power versus electric power trials were held for training the turrets aboard *Brooklyn*. The upshot was that electric power was introduced generally in the Navy for this purpose.

The "big ten" came on the scene in 1905-08. Though armored cruisers, they were named for states. Four of this group had 10-inch rifles, the others had eight-inchers. All had

submerged torpedo tubes. Three scout cruisers—*Chester*, *Birmingham* and *Salem*—appeared on the scene in 1908. Mounting five-inchers and three-inchers, they were lightweights of 3750 tons, in contrast to the 14,500 tons of the four largest "big tens." It was on *Birmingham*, in 1910, that the first flight was made from a ship.

In 1916 Congress authorized 10 scout cruisers and six battle cruisers. The battle cruisers were given famous names; *Lexington*, *Constellation*, *Saratoga*, *Ranger*, *Constitution* and *United States*. They were to weigh 35,300 tons, mount eight 16-inch rifles and have a 35-knot speed. All had their keels laid in 1920-21, but because of the 1923 naval disarmament conference, four of them were cancelled out. Work continued on two of them, however. And in 1925 *Lexington* (CV 2) and *Saratoga* (CV 3) went into service—not

BATTLE TALK—Eight-inch guns of USS Toledo (CA 133) shell enemy in Wonsan. Rt: A CL sounds off during WW II.





ONE OF TWO—King-size cruiser USS Guam (CB 2) patrols in war paint. Rt: Cruisemen of 1880s hold cutlass drill.

as cruisers as originally planned but as aircraft carriers—and the largest of their era.

The 10 scout cruisers were commissioned between 1923 and 1925. Known as the *Omaha* class, they had four stacks and slim lines and came to be designated light cruisers. Fast (35 knots) but light (7050 tons) they served through World War II. Nine were scrapped in 1947. *Milwaukee* had served five years in the Russian navy and was not returned until 1949, when she too was scrapped.

Nine *Brooklyn*-class CLs of 1937-39 were the next "lights." They carried four seaplanes each and had six-inch rifles in five turrets. Then came two modified-*Brooklyns*: *St. Louis* and *Helena*. After this—from 1940 to 1946—came the Navy's most numerous class of cruisers, the 27 sisters of the *Cleveland* class and two sisters of the *Fargo* class.

SPECIAL WORLD WAR II types were the CLAAs, meaning antiaircraft "lights." In all, there were 11 of these; two of them, *Atlanta* and *Juneau*, went down in action.

As with light cruisers, there has been much variety among heavy cruiser types from the 1920s to the present. In 1929 the 9100-ton (standard displacement) *Salt Lake City* went into service with 10 eight-inch rifles in two twin and two triple turrets. Her sister ship was *Pensacola*. These were followed during the next two years by the six *Northampton*-class "heavies." Then, in the early and mid-1930s came two *Indianapolis* class CAs and seven of the *Astoria* class. The *Astorias* had a cruising range of about 14,000 miles.

Largest group of heavies were the *Balmores*. The 10 ships of this class were commissioned in 1943-46. A three-ship modified-*Baltimore* class, led off by *Oregon City*, followed. Of

the straight *Baltimore* class, five are still in commission—*Boston* and *Cannberra* as guided missile heavies and *St. Paul*, *Helena* and *Los Angeles*, as non-missile CAs. *Macon*, also a non-missile ship, is now being transferred to the reserve fleet.

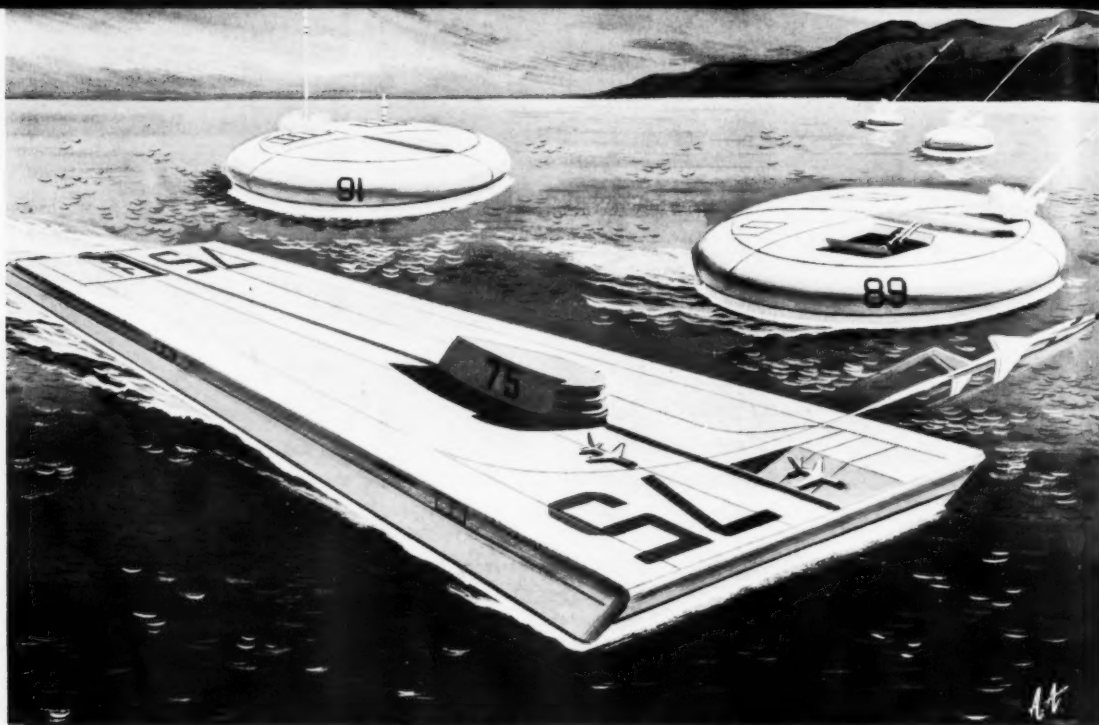
USS Salem has the distinction of being the Navy's last cruiser to go into commission, as a conventional cruiser, that is. (The CLGs were decommissioned before conversion and later recommissioned.) *Salem* led off a class of three CAs, two of which are still in the active Fleet—*Des Moines* (CA 134) and *Newport News* (CA 148).

Newport News went into commission in January 1949, just five months before *Salem*. She bears out the fact that cruisers really live up to their name as cruising ships—for since her commissioning she has steamed some 590,000 miles.

—W. J. Miller, JOCM, USN.

AT SEA—Guided missile light cruiser USS Galveston (CLG 3) packs Talos. Rt: Cruiser is refueled in the Med.





TOUCH OF TOMORROW—Drawing shows possible applications of hydroskimmers as carrier and missile launchers.

Sailing on a Bubble

The October 1960 issue of *ALL HANDS*, page 8, contained an article entitled "Meet the Grasshopper Ships," about the Navy's new hydrofoil craft. Moving at high speeds, its hull rises free of the water, being supported by fragile-appearing hydrofoils, that sit in the water.

Here's a report on a revolutionary and still different type of craft—the hydroskimmer. This one rides out of the water, sitting on a bubble of air.

YOU MIGHT CALL IT a helicopter without a tail, but it doesn't fly high enough. On second thought, you might call it a car without wheels. No, a car can't travel over water and this machine can cross water, mud, snow, or ice just as easily as dry land.

To be quite objective, it's more of a half-breed—half helicopter and half automobile with the extra qualities of a boat thrown in. Although these vehicles are generally known as Ground Effect Machines (GEM), most officials in the Bureau of Ships describe any GEM which operates over water as a hydroskimmer.

The hydroskimmer rides on a bubble of air. In its very simplest appli-

cation, think of an upside-down wash tub with a powerful fan mounted down through the middle. Now, when you turn on this fan, the tub will rise off the ground. Maybe not evenly or maybe not on all sides, but it will rise up because of the effect of the air being forced into the cavity with no place to escape.

Even out this air pressure, or in other words, let the same amount of air pressure escape on all bottom edges at the same time, and the tub will rise free of the surface—provided you have enough power. Apply more power and your tub will fly higher. Get a larger tub and your machine will become more efficient. So mount a fan inside a tub and you'll have yourself a hydroskimmer.

ALTHOUGH STILL VERY MUCH in the research stage, GEMs are believed by Navy experts to have a great potential, especially for a breakthrough in speed and for amphibious operations. They could carry troops and supplies from the ships to well beyond the shoreline. Larger ones could one day cross the ocean and deposit supplies on the beach.

Antisubmarine warfare may be

another field where hydroskimmers will prove valuable. An ASW craft of this type could sit quietly on the surface until a contact is made, and then fly in for the kill at speeds of 80-120 knots. It could operate for longer periods than a helicopter because it would ride on the surface for certain periods, yet speed to the area of the contact faster than a ship. This yet-to-be tested method of ASW operation is called the Grasshopper Technique. It will probably first be used by the hydrofoil patrol craft currently under construction (See *ALL HANDS*, October 1960).

Hydroskimmers haven't quite acquired their sea legs yet. One expert has commented that they are in the same stage of development now that airplanes were in 1909. In fact, the most ideal shape and propulsion system has not yet been determined. Currently it appears that a rectangular or almost round one is the most desirable.

One of the most successful skimmers yet tested, the *Hovercraft*, was oval-shaped. It was built in England and has made a successful English Channel crossing at speeds of 30 knots. (It is capable of 50 to 60

knots as currently modified.) This crossing proved so successful that a British company has announced plans to build a 100-ton vehicle to be used as a channel ferry.

Ground Effect Machines have caught the fancy of men in almost every field of transportation. A Bureau of Ships spokesman said that there is one already offered by a civilian company.

They are not the answer to every transportation problem, by any means. Right now, for example, the Navy is not even sure what type is the best suited for its purpose.

ENGINEERS AT THE David Taylor Model Basin, where much of the Navy's testing is done, say that hydroskimmers can be divided into several basic types. Which one is best, and which one, if any, will finally become a Navy craft, is not yet known. In the meantime, each of the following types is being tested and considered.

- *Plenum chamber*—This is as close to the simple wash tub hydro-

le of Air

skimmer as you will get. Air is forced down from the top and allowed to escape around the edges. As explained earlier, this lifts the machine free of the ground.

- *Air curtain*—For this type machine, it will be necessary to add some more parts to your wash tub. First, put air jets pointing down and inward around the bottom edges. Next, divide the bottom of your tub into sections, let's say quarters, with open air ducts between sections. Here's how to make your machine work. First, force air down through the ducts between sections. This will form a high pressure air cushion on which your craft can ride. The air jets will hold the bubble under the skimmer. If your tub is rectangular you could add side walls (or skegs) and only have the air curtain forward and aft. This particular type, however, would probably be limited to use on water. Forward motion for this machine, like most others of this type, can be furnished by changing the angle of the air jets, or by separate propellers, or both.

- *Water curtain*—About the only extra equipment you'll need this time, besides that which you already



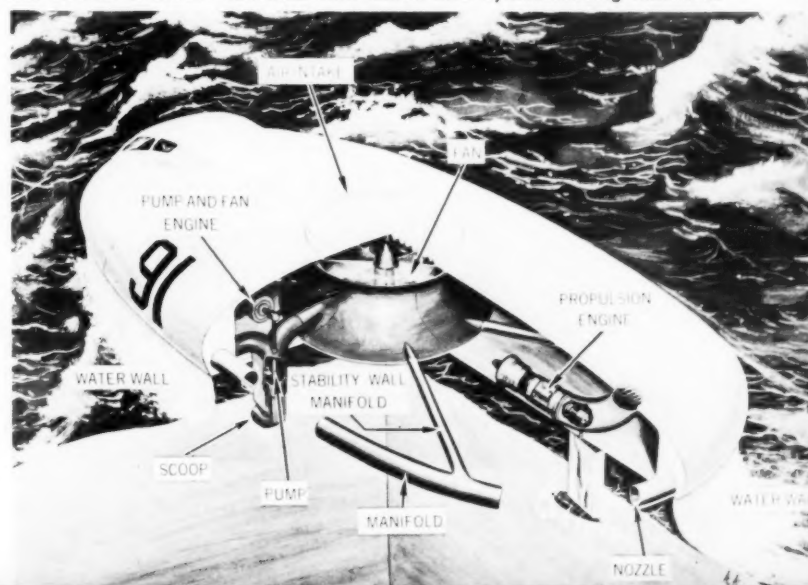
TODAY—Navy's experimental skimmer, *Hydrostreak*, runs on top of water.

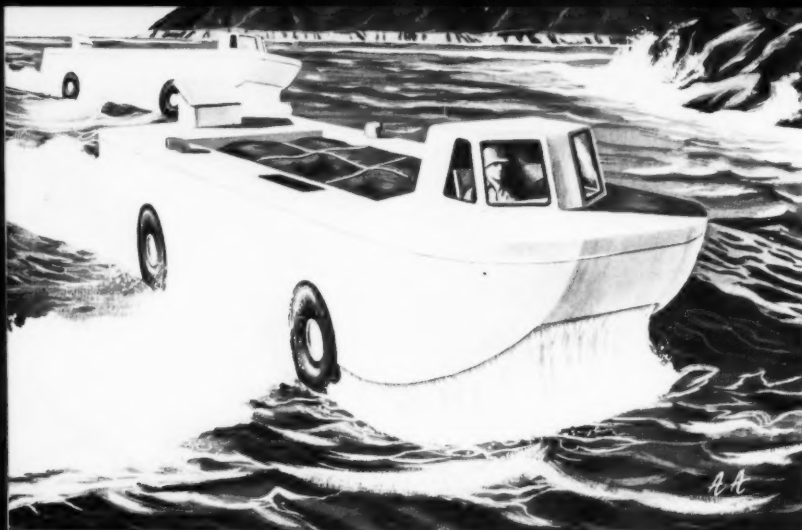
have for your air curtain machine, is a water pump. That's in addition to a lake or some other body of water on which to operate it. You still need the air bubble under the vehicle. The big difference with this one however, is that the jets around the outside must eject water, not air. Of course to get this water, you must have a scoop in the water and a water pump. Although the water will more efficiently keep the air under the vehicle, there is some doubt whether the extra efficiency is worth the extra weight and equipment that must be installed. Propulsion for this type machine would probably be by a propeller in the water.

- *Ram wing*—Your wash tub has outlived its usefulness now. For this one you'll have to draw on your experience as a model airplane builder—it's nothing more than a flying wing. It's not a new concept. A Finnish engineer, T. J. Kaario, suggested it way back in the early thirties. This type machine looks like a wing of an airplane and even uses a similar principle of flight. When this particular hydroskimmer increases speed, less power is needed to keep it aloft because of the ram effect of air entering the front of the machine.

THE NAVY IS NOT SURE which of these configurations is the best.

THE WATER WORKS—Sectional view shows how hydroskimming functions.





POSSIBLE *Hydrostreak*-type amphibious vehicles would use wheels on land.

Maybe one will prove better for certain applications and another for a different job. Right now it doesn't look as though you'll serve aboard one during this hitch.

Before larger skimmers can be built the Navy wants more performance data. Navy engineers have been testing small scale models at the David Taylor Model Basin for several years now. Besides that, certain

civilian companies are developing experimental craft for the Navy.

Before the end of the year, the Bureau of Ships plans to have at least four hydroskimmers under test. These craft will be about 20 feet long and both air and water walls will be used.

The Navy has already tested the *Hydrostreak*, which has water walls fore and aft and skegs on the sides.

LOOKING UP—Bottom of *Hydrostreak* shows gear that keeps craft skimming.



This type of vehicle is limited to operations over water.

Another water wall vehicle has also been delivered to the Navy. It has water on all sides, however, not just fore and aft. This vehicle will be capable of 15 knots or more.

An aircraft company is also producing a hydroskimmer for BuShips. It has air fore and aft with side skegs. Vehicles of this type have a much higher speed potential than the water wall types.

A fourth craft is being concurrently tested by the bureaus of Weapons and Ships. It will be a diamond-shaped, full-peripheral air machine.

BESIDES THESE VEHICLES which are undergoing Navy tests, Bureau of Ships officials are interested in several other air-supported craft. One such craft is being tested by the U.S. Marine Corps and several by the U.S. Army and Air Force. One successful hydroskimmer is the already-mentioned *Hovercraft*.

Another craft which may provide useful data not only has side skegs, but also has flaps forward and aft which move up or down as they are hit by waves. This is a fairly new field of research, and not too much apparently is known of it yet. A hybrid, it does not strictly qualify as a hydroskimmer—its inventor calls it a "lubricated craft."

Hydroskimmers have a place in the future U.S. Navy. Current development plans in the Bureau of Ships call for a craft about 40 feet in diameter which would be a large scale model of an oceangoing craft. In a later building program it is expected that an experimental type will be built of a size large enough to demonstrate ASW capacity in the open ocean.

Although the Navy knows the skimmer theory works, it's hard to determine just how larger ones will operate. Engineers believe that as they increase in size, they will also increase in efficiency. This leaves one to speculate that future aircraft carriers or large ocean-going transports may be hydroskimmers. Although laymen may question whether cargo can be stored in this type craft, the experts maintain that when they reach operational size, there will be room for more cargo than the craft can lift.

It is hoped that operators of small amphibious type hydroskimmers will be able to handle their craft with

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little more training than they now need to operate present day landing craft. The vehicles will probably be harder to maintain and repair than today's amphibious type craft, but less difficult to repair than an airplane.

AIR-SUPPORTED VEHICLES are not perfect. For one thing, they are noisy. And possibly the biggest problem is the high velocity downwash. In other words they kick up a lot of dust on land and a heavy mist at sea. This downwash problem decreases, however, when the vehicle operates about 30 mph or faster—at which speeds they outrun the fog or dust.

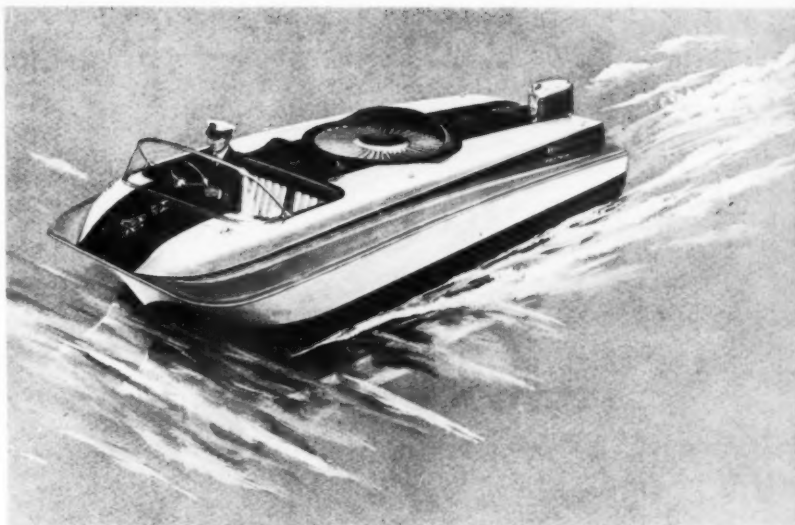
The mist effect will make it almost impossible to load these craft while they hover over water. It will be necessary either to land them on the water or hover them over a hard surface. These are matters that will be further explored after hydroskimmers become operational.

Probably one of the most difficult maneuvers to be learned by a hydroskimmer operator (or driver or pilot, whichever he will be called) will be to turn or to stop. Its stopping characteristics will be much like an airplane. You don't stop an airplane in the air, and hydroskimmers will be much the same. At present, it appears that the only way to stop them is to reverse propulsion, hover, and then set them down.

When it comes to turning corners, there is no great problem except the operator must use a greater area in which to turn (mechanically, the vehicle will be turned by changing the angle of the air jets). Besides that, he'll have to make up his mind to turn before he gets close to an obstruction—there can be no last minute decisions.

HYDROSKIMMERS ARE POTENTIALLY faster than any other type Navy ship now in existence or even in the dream stage. Peripheral air seems especially suited to high speeds because it will be hampered only by wind resistance. Water wall vehicles or vehicles with side skegs will have a certain amount of drag in the water and will therefore be unable to obtain the high speeds that will be possible with the peripheral air machines.

Another area of speculation regarding hydroskimmers is their seaworthiness. Maybe this will determine the type the Navy will decide



NEW MODEL—Sketch shows hydroskimmer to be delivered to the Navy.

to use. The vehicles with side skegs may be more seaworthy, say, than a peripheral air machine. Yet the one with skegs would be limited to lower speeds because of the water drag. They might also be restricted to the water.

The reaction of GEMs in at-sea conditions is another question mark in their development. About the only concrete proof of their ability was shown last year when the British *Hovercraft* crossed the English Channel. That craft flew only about a foot above the surface, yet it is easily maneuvered through four foot swells

at speeds up to 30 knots. Ocean-going hydroskimmers are expected to fly about 10 feet or more above the surface.

But what happens if you lose power while flying at say, 50 knots? Will it glide to a stop or will it crash immediately? And if it crashes, will the lightly constructed machine take the beating? These are in an area of speculation and until more research is done and eventually larger hydroskimmers are built, they will remain in that area. The Navy will find the answers, but it may take a while.

—Erwin A. Sharp, JOC, USN.

WATER WALL at stern and bow keeps Navy's skimmer riding on air cushion.





HOME PORT—A. K. Loudermilk, BU1, and N. F. Barnes, BUL3, finish exhibit. Rt: BU mans saw in center's shop.

Let's Get the Show on

ONE OF THE DARDEST SIGHTS seen by Navymen on leave may be found at almost any state fair. Hundreds of miles from a major Navy activity—say somewhere in Alabama or Utah—the sailor will be walking around the fair grounds when something catches his eye. Coming closer, he sees that it is a Navy exhibit.

Manned by fellow Navymen, the exhibit might be a full-scale replica of the *Polaris* or *Talos* missile. Or it might be a "walk-thru" van with a display of modern seapower.

These exhibits, and they take several forms, are home-ported at a famous building in Arlington, Va. (It housed the Navy's first radio station, "Radio Arlington," from 1913 to 1956.) It is now the headquarters building of the Navy Exhibit Center.

On duty here are some 25 enlisted men, chiefly PO2s and above, and three officers, one of whom is the OIC. By rating, most of the enlisted men are BUs and EOs. The civilian force numbers 16.

It's a busy place. Right now an EO1 and an SN are giving the final

checks to their seven tons of display material, soon to be trailer-hauled to upstate New York. A BU1 and BU2 are turning to with civilian craftsmen in the construction shop, shaping up a new exhibit on anti-submarine warfare. In the design section a DM2 inks in the final details on a drawing for an exhibit that shows Navy engineering standards.

In such a manner the center puts its assigned mission into work-day action. It is a mission that requires the center to "facilitate through the medium of exhibits and other visual

ON 'CRUISE'—Story of HASP is studied by county fair visitors. Rt: *Talos* and exhibit vans stand in midway.



ALL HANDS



shop. PLANS drawn by F. L. Nosek, DM3.

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means" the Navy's programs in five major areas. Two of these areas are recruitment and personnel procurement, and internal training and indoctrination. The other areas are of a somewhat different nature, being (1) property and material acquisition and disposal, (2) technical, scientific, research, development, procurement and production, and (3) incentives to industry.

These last three areas give the center a close tie-in with the Office of Naval Material. Fact is, the Chief of Naval Material has management control of the center. (The Chief of Information has technical control.)

Some of the center's most interesting exhibits are of the show-industry type. Here are some typical events in which the exhibit center was represented:

- Northeastern States Exposition of Industrial Progress, Portland, Me.
- Midwestern Business Opportunities Show, Fort Wayne, Ind.
- Southeastern Exposition of Business Opportunities, Birmingham, Ala.
- Navy Industry Days Show, Chattanooga, Tenn.

On these occasions such persons as the manager of a heavy-metals plant and a foreman in a sub-contracts plant get a close look at the Navy's hardware needs. They learn about its standards of machinery



POPULAR POLARIS exhibit was viewed by some 600,000 at Minnesota Fair.

tolerances and see how their plant might aid in the national defense effort. Depending on which Navy Department bureau or office (BuWeps, BuSandA, Office of Naval Material, BuDocks, etc.) is representing the Navy there, an official

from that bureau or office will be standing by to offer advice on technical matters and on procurement procedures.

THE BEGINNINGS of the present Navy Exhibit Center relate to the above

SETTING 'SAIL'—W. C. Shawn, EON2, gets instruction from OINC of Exhibit Center, LCDR B. H. Pester, USN, as he takes exhibit on the road on flat bed.





THE NAVY STORY—Skilled hands at Exhibit Center create and build many types of exhibits for the Navy. Here, an exhibit for BuWeps is assembled.

show-industry pattern. Back in 1938 the nation was in a preparedness program in the troubled days preceding World War II. Most of the Navy's armament manufacturing facilities were at the Naval Gun Factory, Washington, D.C., but with the expanding program, commercial plants would be needed to lend a hand. Recognizing that plant management would require help in learning about the Navy's needs and standards, the Navy outfitted several motor trucks with samples of ordnance parts and sub-assemblies. Manned by Navy design and production experts and by contract negotiators, the trucks then headed for the defense plants-to-be.

Later, during the war, other vans were rigged out to support recruiting drives, war bond drives, and Navy Day observances. In 1947 a caravan of 11 vehicles—mostly vans with built-in exhibits—began a nation-wide series of tours.

The exhibit program was already becoming pretty much the Navy's showcase to a large part of the country. So in 1950 an "Exhibit Program throughout the Naval Establishment" was set up, with the Chief of Information as coordinator. Eight years later the Naval Exhibit Center came into being.

One of the items inherited by the center was the Combat Art Section. Here is a collection of 2744 original pieces of art—oil paintings, water colors, charcoal drawings, ink sketches and pastels. Covering the period through two wars back to 1941, this collection shows the work of artists

within the naval service. The subject matter is broad: Combat scenes, crewmen off duty, portraits, ships and aircraft, and general scenes of life-in-the-Navy.

COMBAT ART is displayed in two main ways. First is "Operation Palette." Twice a year a CPO starts out in a large semi trailer van with some 120 pieces of art. He tours a specific area of the country and displays the art at such places as libraries, art galleries, school auditoriums,

Requests for Navy Exhibits

Military and civilian event sponsors who desire Navy Exhibit participation should submit their request to the Chief of Information, Department of the Navy, Washington 25, D.C. A DOD "Request for Armed Forces Exhibits" questionnaire should accompany the request. Exhibits are normally committed on a basis of first-come-first-served, and requests for exhibits should be made three to five months in advance of the date they are required.

The cost of transporting exhibits and, if applicable, the per diem for personnel involved, is borne by the event sponsor—unless DOD rules otherwise. Further information concerning exhibit requests may be found in Chapt. 13, *Public Information Manual* (NavExos P-1035.)

hotel and bank lobbies, and even department stores. Each year about 300 shows are given with some 30 cities covered. Operation Palette has been viewed by an estimated 40 million people, both Stateside and abroad.

Combat art is also shown in exhibitions sponsored by societies and organizations. Such exhibitions usually run from one to three months. From 25 to 500 pieces are displayed.

The Navy Exhibit Center does more than merely show exhibits. It also has to design exhibits and see that the design takes form in a finished product.

First there is the idea. A commander in BuWeps, a civilian expert in BuSandA, a PO1 on recruiting duty, or an official of the center—any one of these, as an example, might see the need for a specific exhibit. After evaluations and conferences, the idea, if OKed, takes form in the Center's design section, finally appearing as a detailed drawing.

Construction of the exhibit is the next step. Most are built in the Center's construction shop. Some, however, are farmed out to commercial firms. It depends on the time and money available and the amount of research needed.

Final step is a realistic, three-dimensional exhibit ready for showing. Any exhibit must be easily transportable and must be "re-showable."

Exhibits are of two main types. One is the mobile type mentioned earlier. A walk-thru van with a sea-power display or a *Talos* missile replica on a flat bed trailer are typical of this type.

The other is the "static" type, illustrated here. These are shown inside buildings and can be set up in short order. A static exhibit usually consists of several flat or curved panels on which are both lettering and artwork, such as drawings, photographs and paintings.

Special, and recently developed, forms of static exhibit are the Center's "do it yourself" exhibits. Lightweight and portable, they can be assembled rapidly and disassembled even faster. Naval District Commandants and Directors of Recruiting Areas have these kits, complete with scale drawings and assembly instructions—and also have the responsibility for having them constructed and displayed within their areas.

Like mobile exhibits, static exhibits are also seen at state fairs. At indoor shows, though, they are more likely to show up at such events as conventions of scientific or technical associations.

A fleet of 10 five-ton and 10-ton trucks keeps busy in hauling static exhibits from place to place, which gives some idea of the number and variety of the Center's static exhibits.

Just about one-half of the Center's work is in support of Navy recruiting, with the mobile exhibits performing the major portion. Fact is, the NEC-men on the road call recruiters their best friends.

SAY YOU'VE JUST LEFT a five-day stand at the North Dakota State Fair at Bismarck. You're driving a 10-ton "cab-over" truck-tractor with a 40-foot lowboy trailer in tow. Atop the lowboy is a full scale *Talos*. It's a 387-mile haul to your next stand, the "Frontier Days" show at Cheyenne, Wyo.

You're wheeling along a few miles outside Cheyenne when a grey sedan marked "Navy Recruiting" pulls alongside. You get the signal to follow it. The recruiters know the show's location; you don't. So you're glad to have them as a guide. Later, while on the Frontier Days show grounds, they help you spot your lowboy, introduce you to some of the local officials and brief you on the details. They'll have their own recruiting booth set up by your exhibit.

Chances are there will be no more than two NEC-men with the exhibit, while there will be several recruiters. With visiting by the public starting at about 0900 or 1000 and ending 11 to 14 hours later, and with the need for the exhibit to be kept in tip-top shape, you'll be glad to have their help, both in watch-standing and in keeping the exhibit looking sharp.

On the road nearly eight months each year are four mobile units. Each departs from its home base at Arlington and, upon returning there, gets refurbished and up-dated as necessary. This year from early August to late October (the Fall circuit) the four units covered 21,300 miles and made a stand of about five or six days at 38 locations in 30 different states.

Unit One is a dual affair. First is a full-scale replica of the *Polaris* missile. Mounted on a flat bed trailer, it gears itself up to a vertical

position while on show. The second part is formed of two semi-trailer vans, each 28 feet in length. On the circus or fair grounds, the "walk-thru" vans are lined up tandem fashion and joined by a gangway.

Navy Seapower is the theme. Exhibits are mounted along each side of offset aisles, with the "deep" displays (such as models of cruisers, submarines and aircraft) on the deep side and the pictorial and graphic displays on the shallow side. Tape recorders tell the viewers what it's all about: Top attendance for one day: 23,026 viewers.

Unit Two is also a two-part unit. A full-scale *Talos* replica mounted on a flat bed trailer is the first part. The second part is a 24-foot trailer. The walk-thru viewers here learn about Navy "Undersea Operations."

Unit Three carries a *Talos* replica on a lowboy trailer. Unit Four is a former Navy passenger bus. The previous interior has been removed; and now the viewers learn about "Today's Navy." Where the windows of the bus had been, are now shown color photos in "shadow boxes." The bus has a built-in, 115-volt generator for self-lighting purposes.

Blue lettering on a glossy white background is the color scheme of the vans and buses. Missiles are a glossy red and white. Though highways and fair grounds make for a dusty combination, NEC-men make it a point of pride to keep their exhibits looking in four-oh shape. Scrub buckets, swabs, paint rags and soap powder are part of the regular traveling gear.

Occasionally NEC-men at a fair will learn that fair officials are considering their exhibit as an entry in the Public Affairs Exhibit category. This means the exhibit competes not only with city and regional civic ex-



BOXED—Packing crate for shipping *Polaris* exhibit is made in Navy Exhibit Center's woodworking shop.

hibits but also with exhibits from the other Armed Services. And from time to time the Blue Ribbon is awarded to the Navy Exhibit Center's entry.

In all, men at the Center consider theirs a good duty—and, above all, as interesting duty. The missile trailer drivers are quick to point out, however, that they are subject to a rather unique road hazard. It seems that on-coming motorists catching sight of the large mounted missiles will sometimes forget what they are doing and let their automobile drift over into the NEC-man's lane.

Bill Miller, JOCM, USN.

Photos by G. Russell, PH2, USN.

GOOD SHOW—Van of Navy combat art starts on New England area trip.



A Pool of Specialists -

GO AHEAD. Name any Navy "specialty" you can think of.

Chances are you'll be able to find a Naval Reserve unit which specializes in training specialists in that particular specialty.

As this is being written, some 25,000 Reserve officers are taking part in more than a score of programs in the Specialist Reserve. Groups of enlisted Reservists are also participating in the Specialist Reserve but the majority of those participating are in Organized drill units.

Formerly designated as volunteer or nonpay programs, the specialist units cover a wide field of activity—ranging from BuShips to the Supply Corps, Censorship to Petroleum, CEC to Politico-Military Affairs. The Specialist Reserve also includes the relatively new—and extremely popular—Naval Reserve Officers School (NROS) program.

Some of these programs emphasize the planning or administrative level. Others are adapted to the unique skills of such Navy specialists as maritime lawyers, research personnel. One—the Composite Program—takes care of the Reservist who can find no appropriate specialist unit in his area. Some Composite units train Reservists with similar specialties; others provide general training.

The Chief of Naval Personnel is responsible for establishing Specialist units and for coordinating training, with the guidance and assistance of certain bureaus and offices which have cognizance over a particular

area of training. The Commander, Naval Reserve Training Command, supervises training and conducts regular inspections.

ALL SPECIALIST RESERVE PROGRAMS—except the NROS—are authorized 24 drills annually. Additional drills may be scheduled, with the approval of the district commandant, if the unit wishes to expand its training beyond that offered through the regular curriculum or if the unit wishes to undertake a special project or study.

Members of Specialist units do not receive pay for their participation. (However, pay billets are authorized for the CO and certain staff members as compensation for their performance of administrative and training duties for their units.)

Active duty for training (ACDUTRA) with pay is available to a limited number of Ready Reservists in the Specialist programs. Other Reservists may be authorized ACDUTRA without pay.

Most programs are open to all qualified Reservists in nonpay status, officer and enlisted.

Here is a rundown of the Specialist Reserve programs today. As you can see, there is virtually no limit to the scope of training available to volunteer Reservists.

BuShips

Harley X. Wilson is a diesel engineer. He's also a lieutenant commander in the Naval Reserve. Twice a month he meets with a group of

Reserve officers ranging from physicists and mathematicians to salvage engineers, naval architects and firefighting experts. All are members of a BuShips Company.

In the event of an emergency, these men would be available to staff activities afloat and ashore which come under BuShips cognizance.

Meanwhile, during their regular drills the Reservists work out engineering problems, study firefighting techniques, ship repair, and the activation of ships in the mothball Fleets.

BuShips Companies have billets for officers who qualify in a number of engineering fields and in specialties such as those mentioned above. Officers with other experience or professional background—and enlisted men in pay grades E-3 and above—may affiliate, with the approval of their commandant.

Censorship

This is a dual program—with units in the Shore Establishment Component of the Selected Reserve and in the Specialist Reserve.

Officer and enlisted personnel who are not specially trained for shipboard duty but who have had experience, education or training in censorship are eligible to take part in this program.

Billets are also available to overage personnel, limited service personnel and those not physically qualified for sea duty. Women officers may fill billets as translators, linguists, administrative assistants and censors. Enlisted men and women may join

FROM SHIPYARDS TO MISSILES, Specialist Reserve units are keeping Naval Reservists in many fields ready for action.



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the program, within certain rating limitations.

The Censorship Program is sponsored by the Director of Naval Intelligence.

Chaplains

Many of the "padres in action" during World War II and the Korean conflict were Reserve chaplains. For example, there's LCDR Charles R. Stuart, CHC, USNR, who joined the Naval Reserve before he completed his theological training. When he was ordained, he accepted an appointment as LTJG. He volunteered for active duty during the Korean fighting. Now he's a member of a Chaplain Company where he drills regularly with other chaplains; his annual ACDUTRA is spent in on-the-job training at various naval district activities.

About a year and a half ago, the Navy distributed a guidebook for Reserve chaplains which was itself prepared by Reserve chaplains. Two years of research went into the first draft, developed by USNR chaplains in workshop seminars at Great Lakes and San Diego. Ultimately, a team of chaplains was ordered to BuPers to complete the project.

There are other assignments for Reserve chaplains—some are pleasant, such as providing a religious note for a patriotic ceremony; others are not so pleasant, such as making a "casualty call" on the bereaved family of a Navyman.

Chaplain Companies may be formed wherever there are enough in-



IN AN EMERGENCY Reservists in Naval Material can handle supply problems.

terested and qualified Reservists to justify the unit.

Enlisted Reservists in the personnel man rating (chaplain's assistant) are eligible to join Chaplain Companies. This gives William Bridges, PN3, USNR, a chance to play the organ at Sunday services; Bridges also has opportunities to show his artistic and clerical talents by designing bulletins for services, helping out with administrative chores and the like.

Civil Engineer Corps

Harry Leroy, Jr., UT3, USNR, is an apprentice plumber. He's a mem-

ber of a CEC Company, and one of thousands of Reservists who apply their civilian training to their Reserve assignment.

Civil Engineer Companies are the "volunteer" counterparts of Construction Battalion Divisions of the Selected Reserve. They provide training for CEC officers, WOs and enlisted Seabees. Instruction covers all aspects of civil engineering as it applies to the Navy—including logistics, pontoon operations, camp sewage, concrete and construction materials, dry-docks, septic tanks, hygiene measures, staging operations, and so on.

IN THE KNOW—Specialist Reserve trains chaplains and helpers. Rt: Reserve intelligence officers hold discussion.



Officers are practicing, professional engineers. WO and enlisted members are proficient in one or more divisions of construction or related trades.

Communications

This is a dual program, with pay units in the Shore Establishment Component of the Selected Reserve and nonpay units in the Specialist Reserve.

When electronics training was reorganized last year, Electronics divisions became part of the Surface Program of the Selected Reserve's Active Fleet Augmentation Component. (See ALL HANDS, October 1960, page 20.)

This action limited the source of experienced and qualified Reservists who would be needed at shore-based communications activities in the event of mobilization. Therefore, a Naval Reserve Communications Program was established, with an initial authorization of 12 divisions in the Selected Reserve. At the same time, all existing Electronics companies and platoons were redesignated as Naval Reserve Communications Companies of the Specialist Reserve.

Membership includes officer and enlisted personnel, many of whom are "ham" radio operators.

Detailed instructions governing this program are still in preparation.

Composite Companies

If your civilian specialty is supervising the threading of right-handed

bolts into left-handed monkey wrenches, chances are the CEC or Seabee programs would be your first choices when you cast about for a Reserve unit to join. But what if there are no CEC or Seabee outfits within range of your long glass?

Try the "Composite" program. Composite units are especially designed to answer the needs of areas where other specialist units have not been established. They are particularly effective in smaller cities, where there are not enough Reservists in a given field to support a specialized type of unit.

Membership of a Composite unit may include officers of any rank and classification and enlisted men of any rating in pay grades above E-1. However, Composite Companies may also be composed exclusively of officers of the same or related technical specialty for which specialized Naval Reserve programs have not been established.

Training is of a general nature—providing instruction in armed forces policy, *Navy Regulations*, general components of the Navy, history, current events, tropical and arctic warfare and so on, all in accordance with BuPers curricula.

Dental Corps

There's more to dentistry than knowing where to stick the needle before pulling the bicuspid or which filling material to stuff into a cavity.

Reserve Dental Corps officers and warrant officers and enlisted DTs and DNs can keep up to date on service dentistry by joining a Dental Corps unit. Everything from problems of the salivary gland to the construction of dentures is covered.

Intelligence

Here is another dual program—with units in the Shore Establishment Component of the Selected Reserve and in the Specialist Reserve.

Training of the "cloak and dagger" personnel includes the field of investigation, preparation of special studies, research and general administrative activities. Intelligence officers must keep up to date on world affairs as part of their Reserve training. Projects include preparing exhaustive intelligence reports for hypothetical attacks on the "enemy." ACDUTRA may be ashore or afloat.

Officers with designators 1635, 1105, 1315, or 1355 may be eligible for membership in Intelligence Companies. Enlisted personnel in pay grades E-4 through E-7, in DM, TE, PH, YN and LI ratings, are also eligible.

Lawyers

No need to consult a "sea lawyer" when you can find a full-fledged attorney almost in your midst.

This all-officer program trains qualified Reservists in military law. Companies are composed of Reserve officers—male and female—who are members of the bar of a federal court or the highest court of a state.

The Reserve lawyers cover such fields as maritime law, contract law and, of course, international law.

Medics

Medical technology, like naval technology, is advancing continuously. And you'll find Reservists of the Medical Department keeping pace with the changes.

Naval Reserve Medical Companies train Medical, Medical Service, Nurse, and Hospital Corps personnel who would be available for mobilization in an emergency. Eligible Reservists include officers with designators 1945 (Medical), 2105, 2305, 2905, 8175 and 8185, and enlisted personnel of the Hospital Corps.

In localities where a Naval Reserve Medical Company does not exist, Reserve medical personnel may request association with other programs. For example, Naval Reserve medical officers are sometimes attached to Marine Reserve units.

CIVILIAN TRAINING is applied to the NR by many belonging to Civil Engineer Corps, the 'volunteer' counterpart of the Seabees of the Selected Reserve.



Merchant Marine

If you are looking for an exception to the traditional concept of Naval Reservists — part-time sailors drilling regularly at their dry-land training center—you need look no more after you spot the Merchant Marine Companies. These units are strictly sea-going and do not train at shore activities.

Merchant Marine Companies are authorized to train in merchant ships which are able to support such training units. Line and supply officers serving in merchant ships are eligible for the program. There are no billets for enlisted Reservists.

When these officers in the merchant fleet come ashore permanently, they are no longer eligible for the Merchant Marine program; however, they may affiliate with the MSTS program, or join a Naval Reserve Officers School.

Military Sea Transportation Service

MSTS is another dual program; there are MSTS divisions in the Fleet Support Activity Component of the Selected Reserve and MSTS Companies as a program of the Specialist Reserve.

Officers experienced in transportation and shipping are eligible for enrollment; women officers with 1105 and 3105 designators are also eligible. Each MSTS company is also authorized three YNTC billets for administrative purposes.

Naval Material

Ever have to write out a requisition for some gear? There's lots more to this business of Navy material than the stocking of goods in a warehouse, the paperwork involved in getting it delivered to the users, transportation and whatnot.

Under the sponsorship of the Office of Naval Material, Reserve officers who have educational or experience backgrounds in business administration, production management, engineering and allied fields, drill in Naval Material Companies. Their training qualifies them to administer, supervise and operate ONM offices in Washington and ONM field sections. Training covers procurement and disposal of material, planning, quality control, industrial security, development contract administration, contract termination, property disposal, industrial mobilization, production, and the like.

There are no billets for enlisted Reservists in this training program.



PETROL PROBLEMS are the meat of officers in the Petroleum program. Training consists of lectures, films and instruction by authorities in this field.

Naval Research

Reservists with a scientific bent—and the necessary technical qualifications — may affiliate with Naval Research Companies.

Membership covers three general areas: *Research*—Reservists who are qualified and currently engaged in the conduct or administration of scientific research; *Special Devices*—aeronautical, mechanical, electronic, and electrical engineers with knowledge of the application of their field to synthetic training devices (this category also includes statisticians and educators in technical fields); *Contract Administration and Patent Law* — lawyers with experience in either field, individuals with experience in government research contract administration, patent, trademark, or copyright matters.

Enlisted Reservists who are potential officers may affiliate; Reservists with special devices ratings may also take part in the program.

Naval Security Group

This is another dual program, with one section as part of the Shore Establishment Component of the Selected Reserve and the other a part of the Specialist Reserve.

Officers with designators 1105, 1615 and 7645 are eligible to participate. Enlisted Reservists may fill administrative billets only.

The program is under the cognizance of the Director of Naval Communications.

Ordnance

Reservists enrolled in the Ord-

nance program are on their toes keeping pace with the rapidly changing technology in their field.

Members of this program study guided missiles and all types of ordnance equipment, explosives, arms and armament.

Training includes such subjects as ammunition and explosives, materials and handling, projectiles, fire control, gun mounts and missile launchers, underwater ordnance, aviation ordnance, jet propulsion and countermeasures.

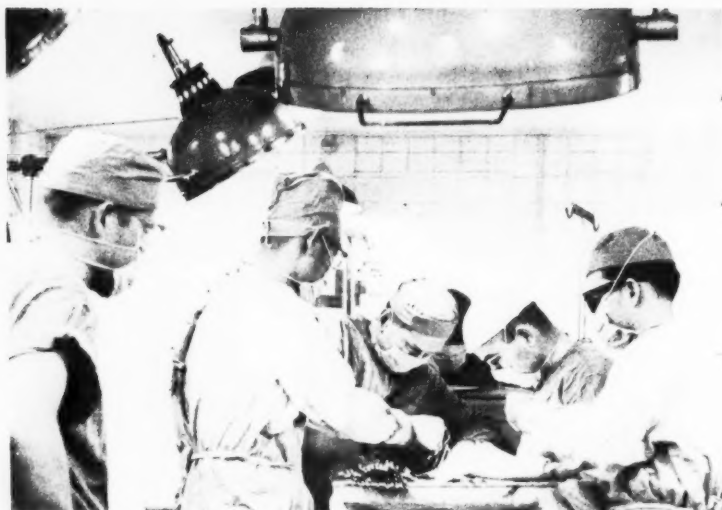
Officers with designators 1455, 7215, 7235, 7245 and 7335 and Navy Qualification Codes in the 949XXX-959XXX series are eligible for enrollment. However, commandants may also authorize the affiliation of officers with other qualification codes and designators, and enlisted Reservists in pay grade E-3 and above.

Upon mobilization, members trained in Ordnance Companies would be assigned to duties with the Ordnance establishment, or in ordnance components of other naval activities and commands.

Petroleum

You don't need to own a Texas oil well to enroll in the Petroleum program—but working on one or even owning one might give you the necessary experience.

Since Reserve officers with experience in the petroleum field are not confined to any one officer designator code, officers associated with petroleum or allied fields, regardless of



RESERVISTS OF THE MEDICAL Department are keeping up with matters in Military medicine through training with Naval Reserve Medical Companies.

designator, may enroll. Enlisted Reservists in pay grade E-3 and above may fill administrative billets in Petroleum Companies.

Training consists of lectures, films and instruction by men prominent in military and industrial fuel activities.

Politico-Military Affairs

Current events, geopolitics and the promotion of better understanding between nations and national groups are studied by Reservists taking part in this program.

Officers whose experience and interest qualify them as specialists in international affairs make up the bulk of the membership. However, enlisted Reservists holding admin-

istrative ratings in pay grade E-3 and above may also enroll.

Public Relations

Ownership of a gray flannel suit is not a prerequisite for joining a Public Relations unit, but knowledge in some area of public relations is.

This program provides qualified public information specialists for mobilization and also assists district commandants in their public information programs.

Training includes lectures, seminars, and instruction in current planning and policies of armed forces public relations.

Membership consists of officers and enlisted personnel, male and

female. There are no rank restrictions for officers; enlisted Reservists in pay grades E-1 and E-2 are not eligible, however.

Reservists who qualify as specialists in the following fields may join: Public relations, advertising, reporting, editing, free-lance writing, photography, broadcasting, telecasting, publishing and motion pictures.

Supply Corps

"Service to the Fleet" has long been the motto of the Supply Corps, and the Corps is striving constantly to improve this service.

Reservists enrolled in the Supply Corps program train for possible mobilization by keeping abreast of the operation and products of the industries that serve the Navy.

Training aids include films and brochures describing the raw materials and finished products purchased by the Navy. Intensive "on-the-job" experience is provided at Supply Corps activities.

Supply Corps Companies are composed of officers of the Supply Corps, including Waves. (No billets for enlisted Reservists in this specialty.)

Naval Reserve Officers School

Although not, strictly speaking, a "specialist" program, the NROS program is a part of the Specialist Reserve.

The mission of this program is to broaden, by means of progressive guided study, the professional knowledge of inactive Reserve officers. Courses are offered which will expand and intensify basic naval professional knowledge; other courses provide limited technical and specialist training for officers in operational billets; and still others provide broad, general professional education essential to the exercise of command and staff functions.

Any inactive officer not on the Inactive Status List is eligible to take part in NROS training. Units meet one night a week for 40 weeks per year for a full-year course, or 20 weeks for a half-year course.

There are now 103 NROS units in operation. Instruction is offered in more than 40 subjects of naval interest, including line, technical, orientation to command, and command and staff courses.

That's it. Quite a program—and it's made up of people volunteering spare time to keep themselves in training for the Navy, just in case there may be a need for them.



COMPOSITE SPECIALTY units solve the problem of those who cannot find a Specialist unit of their particular Navy skill in the area where they live.



Notes of Good Will

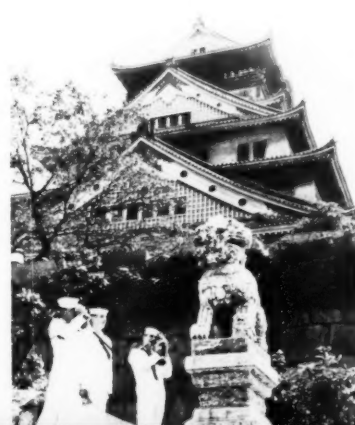
Welcome. When the East and West twain to meet spiritually and mentally, your music gave me strength and comfort. I, as citizen of Takamatsu, take the liberty of sending genuine thanks to you at this time for your music."

This note written by a Japanese worker was typical of the many words of appreciation received for the musical notes played by the Commander Seventh Fleet Band during a concert tour of six Japanese cities.

Traveling by bus, jeep, automobile, cable car, truck and ferry boat as well as their own ship, USS *Saint Paul* (CA 73), the 18-member band covered some 900 miles through southern Japanese cities. The musicians played for audiences ranging from small groups of 200 to a crowd of 75,000 baseball fans.

Clockwise from top: (1) Seventh Fleet band performs for 75,000 between innings and games at baseball park in Osaka. (2) D. L. Muir, MU3, USN, joins in with high school band during parade and concert program at Himeji. (3) U.S. Navymen play for Japanese sailors and their families. (4) Navy band men join in the fun, learning native dance at reception in their honor. (5) Crowd at amusement park gets big kick out of band concert. (6) Navymen have fun visiting zoo while on good will tour. (7) Cameras go into action as band members visit Osaka castle built in 1584.

—Bob Lamber, JO2, USN.



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ANDS



MERRY

ONCE AGAIN it is the time of year when people the world over take time out from their regular routine to celebrate the Christmas holidays. Navymen are no exception, for whether on ship or shore, overseas or stateside, they'll be joining in the Yuletide celebration.

Colorful lights will decorate Navy ships. Christmas trees will spring forth from steel decks and appear at shore stations. Toylands will open for the small fry and, of course, Santa Claus will make the rounds. Navy chaplains will provide the religious ceremonies for Navymen and their





RY CHRISTMAS

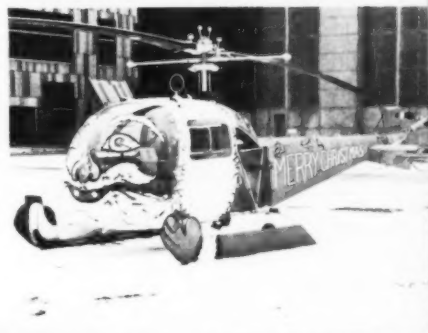
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families and, in keeping with the holiday spirit, the less fortunate in the United States and foreign lands will not be forgotten.

A small sample of the Navy's big holiday spirit is shown on these two pages. *Clockwise from upper left:* (1) Greeting on *uss Midway* (CVA 41) speaks for itself. (2) Santa appears by way of helicopter at many installations to greet Navy children. (3) No "dreaming" of a white Christmas for the Navymen in many frigid areas. (4) *uss Northampton* (CLC 1) decks out her large forward mast to help spread the holiday spirit. (5)

Decorated whirlybird becomes sleigh-bird for Santa greeting children in the NAS Lakehurst, N. J., area. (6) *uss Willis A. Lee* (DL 4) and other well-decorated ships light up the area at Newport Naval Base destroyer piers. (7) The religious aspects of the holidays are not forgotten by Navymen. (8) and (9) Navymen bring a brighter Christmas to children in many parts of the world. Here, destroyermen of *uss Prairie* (AD 15) hold party for Japanese orphans and (above) orphans from Nice, France are feted on board *uss Des Moines* (CA 134).





HIGH—ETs inspect antennas atop building. Below: H. D. Howland, ETNSN, and J. R. Moody, ETNSN, at work.



MIRAMAR MAGIC—G. C. Blackburn, IC2, loads a tape recorder and (Rt.) L. H. Triplett, ETNSN, checks on transmitter.



ET'S, C. R. Rowley and R. M. Howes, align receiver.

Electronics

Voice communications between pilot, tower and ground control approach operators are almost as indispensable in modern aviation as wings on planes.

The ground electronics section of the Operations Department at Miramar, NAS, near San Diego, Calif., is responsible in this field of communications at one of the Navy's largest air stations.

With facilities spread out all over the station, plus homing beacons on Mt. Woodson and Camp Elliott nearby, ground electronic work at Miramar is comparable to that of a radio station and telephone company combined. Millions of miles of small wires with multi-colored coverings weave an unseen spider web, with its center in a small unimposing "frame room" on the second floor of the operations building. Here the wires converge to mold the transmitters, receivers, controls and other electronic gear into one gigantic, effective communications system.

It is the job of ground electronics men to install, maintain, repair, replace and inspect this equipment. It is a job for professionals—and Navy has them.



LETTERS TO THE EDITOR

Change in Designator

SIR: I became a designated yeoman striker (YNSN) as a result of the February 1960 exam. However, I have been working in a post office for the past year, and would like to go up for Postal Clerk third class in the February 1961 exam.

Do I just go ahead and take the PC3 test, or must I request a change of designator before I could be eligible?—J. F., YNSN, USN.

• You definitely cannot take the PC3 exam as a YNSN. Paragraph eight of Article C-7215, "Bupers Manual," says strikers for a particular rating are eligible for advancement only in that rating.

Your request for a change of designator should be submitted to the Chief of Naval Personnel (Attn: Pers B223) through the chain of command. The article we quoted above contains complete information on this procedure.—Ed.

Wants to Go Back to Sea

SIR: I would like to be transferred back to sea duty. My shore duty tour began a few months ago and I have been told that I must remain on this tour of shore duty until December 1962.

It seems a shame to keep someone on shore duty when he doesn't want it—and to keep someone else at sea who would like to be ashore.

I joined the Navy to see the world. When I reenlisted, however, I received shore duty orders. Isn't there any way for this sailor to go back to sea?—V.H.M., AM2, USN.

• Sorry, but it looks as though you will have to complete your shore duty tour. The sea-shore requirements both in the overall Navy and in the Group IX ratings run about 50 per cent sea and 50 per cent shore. The shore billets have to be filled, too.

Switching Rates, Next Duty

SIR: I am a former teleman who switched to YN in 1958. I am currently on a tour of recruiting duty, with about 32 months remaining on that tour.

I am interested in attempting to convert to the new postal clerk rating recently established, but—first I'd like to find out if changing my rating would affect my tour of recruiting duty.—K.E.H., YN1, USN.

• Have at it, and good luck. Changing your rating will not affect your tour in any way.—Ed.

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

For the four reasons why rotation to shore duty (as well as to sea duty) is necessary, we suggest that you read Art. 1.15 of the "Enlisted Transfer Manual."

There are no provisions for a swap from a shore duty billet to a sea duty billet, or vice versa. However, if your command approves and if a fleet crew member of the air transport squadron at your air field wants to swap with you, then you would have a chance to see more of the world.

Of course you're learning this a little too late to do you much good—but when you were on sea duty you could have requested an extension of sea duty. Art. 3.33 of the "Enlisted Transfer Manual" gives details on this procedure.—Ed.

Courses for Dental Technician

SIR: Recently I heard that before taking the test for Dental Technician First Class I would have to complete two correspondence courses in addition to the courses I have already completed. The two are Dental Technician Prosthetic (NavPers 10685-A/91687-1) and Dental Technician Repair (NavPers 10687-A/91689-1).

I can see where those courses would be required for DTs in those specialties, but I am a non-specialist within the rating and do not expect to specialize.—T.F., DT2, USN.

• Courses mandatory for advancement in rating are listed in "Training Publications for Advancement in Rating" (NavPers 10052-H). These courses, whether Navy Training Courses or Correspondence Courses, are based on the quals as included in the manual "Qualifications for Advancement in Rating" (NavPers 18068). The Qualls Manual states that the areas covering prosthetics and dental equipment repair are required only of DTs in those specialties. Therefore the courses covering those specialties are required only for personnel who are now specializing or who will be specializing in those particular areas.

In short, you would not have to complete the two courses to be eligible. It

wouldn't do your career any harm if you did complete them, however.

For further information about the general requirements for advancement in rating you might refer to Part C, Sect. 2 of the "BuPers Manual."—Ed.

Hail Hale

SIR: In the July and August issues of ALL HANDS, you published statements from a couple of AGRs about the number of hours they had steamed in fiscal year 1959.

Let not the DERs be outdone.

While performing the same type of duty—barrier operations—uss Roy O. Hale (DER 336) did a lot of steaming not only in fiscal '59, but also in '58 and '60.

In FY 1958 we steamed 7669 hours, or 87.2 per cent of the total number of hours in that year.

In 1959, although the ship underwent a three-month overhaul, she still steamed 6202 hours for a percentage of 70.8.

And, in 1960 we steamed 6968 hours for a figure of 79.5 per cent.

These statistics were compiled after a close and detailed check of our operating records.

When it comes to hours' steaming, we of uss Roy O. Hale feel it would take a lot to outdo a DER.—Earl T. Lentz, FN, USN, The Log Room.

• Congratulations. We're glad to see you're making such good use of your ship.

We'd like to be able to give you a more serious answer, but if we tried to give the men on barrier duty all the credit they deserve, it would probably take us every page of every issue for a year or two.—Ed.

On Right Ribbon

SIR: Take an occasion that calls for the full dress uniform, and a person has been awarded a Presidential Unit Citation, a Navy Unit Citation and a PUC from a foreign country. Are each of these worn on the right breast at the same time?

—P.F., LTJG, USN.

• No. As Uniform Regs tells it, when full dress is prescribed only the Presidential Unit Citation ribbon (U.S.) or the Navy Unit Commendation ribbon may be worn on the right breast. If you have been awarded both, only the PUC may be worn. No other ribbons may be worn when large medals are prescribed.—Ed.



GOOD START—A. L. McCall, SA, receives American Spirit Honor Medal from Richard Jackson, Asst. SecNav, during graduation at USNTC Bainbridge.

Training Subjects for E-8 and E-9

SIR: I have heard or read that some sort of course will be made mandatory for advancement to E-8 and E-9 next year.

However, when I applied for such a course to study for Master Chief Hospital Corpsman, I was informed there was none available.

Can you give me any information on

GOOD LOOKING — Sailors look sharp during inspection by CAPT. W. D. Bonvillian at NAS New York.



the "mandatory and optional training subjects" for E-8 and E-9 advancement? —M.S.F., HMCS, USN.

• Yes. The mandatory and optional training subjects for E-8 and E-9 advancement are listed in the March 1960 edition of "Training Publications for Advancement in Rating," (NavPers 10052-H).

This publication has been distributed to all ships and stations, and additional copies are available through regular publications supply channels. The study subjects are confined to the military requirements bibliography.

The courses made mandatory for the 1961 exams are: "Navy Regulations" (NP 10740-A) for E-8's, and "Military Justice in the Navy" (NP 10993) for E-9's.

Other publications that should be read include: "Administration of CPO Messes Ashore"—for E-8's; "Division Officer's Guide"—for E-8's and E-9's; and "Status of Forces Agreements" (NavPers 10008)—for E-8's and E-9's.

For complete reading recommendations, you'd do well to get a copy of NP 10052-H.—ED.

Temporary Service for LDOs

SIR: I have two questions, the answers to which will be of interest, I think, to many LDOs.

First, do the years served as a temporary commissioned officer during World War II count toward "total commissioned service" in computing 10 years' total commissioned service for retirement?

Second, is the Bureau considering re-establishment of dates of rank for those officers who previously served as a warrant or commissioned officer? This is asked in view of the present program under which warrant officers are being promoted to LDO.—LT. M.C.S., USN.

• Any service as a temporary commissioned officer in the grade of commissioned warrant officer W-2 or above is counted in the determination. Title 10, U.S. Code, Sect. 6323 states, in part: "For the purpose of this section (Retirement on 20 years of active service) an officer's years of service as a commissioned officer are computed by adding all his active service in the armed forces under permanent or temporary appointments in grades above Warrant Officer W-1."

As for your second question, the only adjustments in rank being contemplated are those for LDO and MSC officers with former warrant service who are now serving in grades below O-3. These adjustments are prompted solely to equalize these officers with their former warrant contemporaries who will be appointed in grades up to and including O-3 under the Special Warrant to LDO selection board.—ED.

Letter from ROK Navyman

SIR: It is a great pleasure to write this letter.

I had duty as a Republic of Korea Liaison officer for several months in 1951 (from June to December), on board USS Los Angeles (CA 135). It is one of the most modern and finest combatant ships I have ever seen. I have never forgotten the valuable naval experience obtained during this period, which I consider to be one of the best training courses I have ever received.

I have been attending the Bureau of Naval Personnel Management Course at Washington, D.C., as a student officer since July 25th of this year. During my stay here, I had the honor of meeting Admiral Burke, Chief of Naval Operations, who was Commander Cruiser Division Five in 1951, and Mrs. Burke. I also met Captain McFarlane, the then Commanding Officer of Los Angeles, and Mrs. McFarlane. Seeing both Admiral Burke and Captain McFarlane, I remembered that I had sailed with them aboard Los Angeles off the coast of Korea.

Captain McFarlane had taken a particular interest in me, who had no practical knowledge of United States naval life at the time. I was very grateful in being assigned to each department of the ship to receive training and education about the various aspects of my sea duty. I have always remembered, whether I was serving afloat or ashore, that learning about United States naval life was a valuable period of my training. This precious experience on board that ship has always been a guide and orientation in my service in the Korean Navy. Therefore, life aboard Los Angeles is fresh and vivid in my mind even now.

I would like to take this moment to convey my deepest appreciation to Admiral Burke, Captain McFarlane and

other naval officers and men under their command in 1951.

Wherever I may be, the memory of those days will always remain in my heart.—Pak Chan Kuk, CDR, Republic of Korea Navy.

• Thanks for your kind comments about our Navy and the men who serve in it. We like to feel that your attitude represents that of the large number of personnel of foreign navies with whom the U.S. Navy comes in contact. Best of luck to you and to the ships and crews of the Republic of Korea Navy.—Ed.

Overloaded Weatherford

SIR: This paragraph about USS Weatherford (EPC 618) was part of a letter in your August issue from an ENS C. R. L., USN:

"Today at Key West, the 441-man crew is willing and ready to take part in any sporting event, fund-raising drive or, for that matter, anything where competition is involved."

We at the Recruiting Sub-Station in Monroe, La., contend:

First—that Weatherford is overmanned, probably because someone forgot to have the crew fill out Seavey cards. With practically everyone in the Navy being sent to this ship and no one leaving her, it's no wonder there's so much pressure on Recruiting to find more men for the Navy.

Second—that Weatherford has a serious berthing problem.

Since Weatherford is of 1942-vintage, I am sure she cannot accommodate 441 men in 173 feet of ship.

Is this an error on the part of ENS C. R. L.—W. C. Choitz, SHC, usn.

• Congratulations—you have just discovered the real reason behind Weatherford's zest for competition against other ships.

Obviously, the men are so anxious to get away from excessive togetherness that they are willing to compete against anybody in anything—so long as the competition is held in the opponent's territory.

We understand Weatherford has not played a home game in any sport for several years. As we heard it, the last time was when she challenged another ship to a checker match. Unfortunately, the match had to be called off because 20 or 30 men on the edge of the crowd fell overboard when the spectators around the checkerboard stepped back so the board could be opened.

The berthing problem in Weatherford is not as bad as it might seem at first glance, since new crew members quickly learn to sleep standing up. Another thing new men learn quickly is to put in their retirement papers on their first day aboard. That way they can be sure of getting through to the gangway by the time they've completed their 19 and six.

Now, in case you're interested in



HAPPY CREW—Newly commissioned officers, graduated from U. of Wisconsin, hold ENS Gay Rost, Nurse Corps, USNR, school's first commissioned coed.

mere facts, we hereby inform you that ENS L. was not responsible for all this. The whole business was the result of a typo which we didn't catch.

Ensign L. did catch the mistake—and to show you what a wide-awake PIO he is, we offer the following letter as evidence.—Ed.

SIR: The officers and enlisted men of Key West Test and Evaluation Detachment were delighted with the write-up you gave Weatherford.

Her type commander, Commander Service Force, Atlantic Fleet, has just adjudged her the best in her class in the Battle Efficiency Competition for Fiscal Year 1960, and the scrappy little PC also won a Communications "C."

Incidentally, the ship has an onboard count of four officers and 41 enlisted men—not 441 men, as stated in the August issue. However, Weatherford does the sort of a job that would lead one to believe she has that big a crew.—ENS C. R. Lane, usn.

Aviation Ground Officer

SIR: Is it possible under the Integration Program to obtain designation as an aviation ground officer?

The squadron's Education Officer and I have thoroughly studied the directives on the Integration and LDO programs. As we interpret this material only the LDO program offers the opportunity for designation as an aviation ground officer.

I would like to be commissioned and remain in the aviation field. It will be two years before I am eligible to apply for LDO, but I can apply for Integration at any time.—J.R.S., AD2, usn.

• Yes, it is possible.

Selectees under the Integration program are appointed as officers in the

Line (1100), Supply Corps (3100) and CEC (5100). However, men appointed in the Line may apply for a change of designator to code 1350, "A line officer, a member of the aeronautic organization who is not a pilot." Application for the change would be made in accordance with BuPers Inst. 1210.6A.—Ed.

LOVELY LASS holds a radiosonde, part of NOL's new one-pound rocket-borne weather station. It transmits high-altitude temperatures to ships below. A metalized parachute, when tracked by radar, gives wind info.





LEADERS ALL—First Class POs, graduates of leadership class at NAS Oakland, pose for photo with instructors and CO.

Computing Leave Credit

SIR: My question concerns the computation of leave credit for fractional months of service.

The case in point involves a man who enlisted on 7 Jan 1960.

Since he was in the Navy for 25 days of that month, I claim he should be credited with a full two-and-one-half days of leave for it. Those on the opposite side of the discussion contend he would only get two days of leave credit because half a day would be deducted for the six days he did not serve.

We'll buy what you say.—R. H. W., YNC (SS), USN.

• You win—he gets the full two-and-one-half days.

Article C-6301 of the "BuPers Manual," which covers this subject, says, "Leave shall accumulate for fractional parts of a month in accordance with the following table:

- 1 to 6 days, inclusive $\frac{1}{2}$ day
- 7 to 12 days, inclusive 1 day
- 13 to 18 days, inclusive $1\frac{1}{2}$ days
- 19 to 24 days, inclusive 2 days
- 25 to 31 days, inclusive $2\frac{1}{2}$ days."

You'll notice that the sentence preceding the table gives those figures as the rates at which leave "shall accumulate"—not at which it would be deducted for time not served.

Which goes to show once again the power of positive thinking.—Ed.

Opportunities for a Commission

SIR: Take the case of men in the 26-to-29-year-old category. They are in their second enlistment; have been on active duty eight or more years; are in a grade of PO2 or above; plan on a full career in the Navy. Most of them have a high school diploma.

Many men of this group would like to go to college. Earlier, the only way to do so had been through the Navy's Enlisted Advanced School Program, which no longer exists. But owing to a change in requirements these men have lost their opportunity to attend. The change I speak of is lowering of maximum age limit (with no waivers).

Yet the program is offered to younger men who may lack the maturity and purpose of these in the older group—and who may not be careerists. I think a program similar to NESEP should be started for men in the 26-to-29 group, a program whereby they could attend college full time.—W.A.F., AE1, USN.

• The men you describe are prime candidates for LDO(T) and, in fact, are looked upon as the source of officers for this program. That they are no longer eligible for NESEP rests on a decision made in May 1959, which combined NESEP and the older NEASP into the present program.

When the programs were combined, the new NESEP became an officer procurement program as an in-service supplement to the Naval Academy and the NROTC. The graduates of NESEP will be career line officers with the same opportunities, responsibilities and duties as their contemporaries from the other two programs.

Flags in Boats

SIR: I know that ships' boats fly the national ensign in ports overseas. How come in Stateside ports they fly the ensign sometimes and sometimes they don't?

—E.E.S., YNSN, USN.

• It depends upon who is embarked. The national ensign is flown from ships' boats stateside: (1) when an officer or official is embarked on an official occasion, and (2) when a flag or general officer, a unit commander, a commanding officer, or a chief of staff (in uniform in each case) is embarked in a boat of his command or in one assigned to his personal use.

The ensign is also flown when ships in the area are required to be dressed or full dressed and when going alongside a foreign vessel. And lastly, the ensign is flown when so prescribed by the senior officer present.—Ed.

The maximum age limit was lowered from 30 to 25 to insure that NESEP graduates (new maximum age upon graduation, 29) would be more nearly the same age as graduates of the two other programs.

The majority of those selected for the NESEP are POs and have proved through their performance their officer-like qualifications. In addition, considerable care is taken to insure that all those selected are career men.

Men in the 26-to-29 category have many opportunities in the LDO(T) program. While that program has no provisions for college training, it still has numerous aspects that merit consideration. Fact is, the opportunities for a commission are greater through the LDO(T) program than through the NESEP program.

The LDO does not require college training in the performance of his duties. To send him to college would result in a loss to the Navy of his technical knowledge and skills during this period. The LDO does not compete with college or Naval Academy graduates for promotion.

The matter of college training in general is another subject. It is not offered by the Navy in order to fulfill the desires of individuals. Rather, it is offered to those persons who will require it in performing assigned duties to meet the needs of the service.—Ed.

Consecutive Days at Sea

SIR: I served on board the heavy cruiser USS Rochester (CA 124) during the Korean conflict. Could you furnish me with some information on her activities during that time?

First—what was the longest stretch for Rochester at sea without sighting land? Also—how many consecutive days was Rochester at sea at any one time?

I would much appreciate seeing some printed proof on these questions. There's a CPO here at NAS Dallas who isn't about to accept my word for it.—CPL J. P., USMC.

• Well, Corporal, either the Chief will have to take your word on the first

item, or the argument will just have to continue indefinitely. In order even to attempt to answer your question, it would be necessary to check every position ever noted in Rochester's logs during the Korean conflict. Then those positions would have to be fixed on a chart, and calculations based on weather, etc., made to determine when the ship was out of sight of land. Obviously, this would be impossible.

Now, in regard to your second question—according to a report submitted by Rochester herself, in October through December 1950, she operated for 81 consecutive days at sea. This was apparently her longest continuous stretch at sea during the Korean War.

Hope this will help substantiate your claims—anyway happy sea stories.—ED.

Why Sea Duty Tour Was Extended

SIR: After completing required sea duty and submitting my Seavey card, I hopefully assumed that upon completion of my overseas tour I would be ordered to shore duty.

Instead, some months after submission of my Seavey card, my personnel office received an IBM card stamped "Deleted from Seavey. Tour extended beyond report range. Instructions forthcoming from appropriate EPDO." This was followed about a week later by a letter from EPDOPAC, stating that my sea tour had been extended 14 months, and requesting my choice of homeport and type of ship.

No doubt the needs of the service dictated this extension—however, at least two other CPOs (one RMC and one TERMCA) both with less time on their current tour than I had, have received their Seavey cards back with the Naval District to which they will be assigned.

I know very little about the workings of Seavey, and what I do know I'm

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, **ALL HANDS** Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• **uss American Legion (APA 17)**—A reunion is being planned for the fall of 1961. All shipmates who are interested may write to Nick Buongiorno, 688 Clifton Ave., Clifton, N. J.

• **uss Iowa (BB 61)**—Those who served from February 1943 to November 1945, and who are interested in holding a reunion, may write to Ben Kozdras, 2636 Birch Ave., Whiting, Ind.

• **Composite Squadron VC-99**—All who are interested in holding a reunion in the midwest in 1961 may write to Charles E. Scheffe, 360 South Spencer Ave., Indianapolis 19, Ind.

not sure I understand. I would appreciate it if you could answer any or all of the following questions for me.

Do I submit another Seavey card with my segment when that time rolls around again?

When does this 14-month extension commence?

Will this added sea duty increase the possibility of my getting my first choice of duty when I am ordered to shore duty?

How was it determined that my sea tour be extended, while others with less sea time on their current tour were ordered ashore?

Did my choices of duty listed on my Seavey card have any bearing on this? If I had requested "anywhere U. S.,"

would I have received shore duty orders?

Did the fact that I am now serving overseas instead of afloat have any effect?—D.W., RMCA, USN.

• That's a big order, Chief, but here goes.

Yes, you should have already submitted a card in November 1960 for Seavey Segment 1-61, and you will be considered after completion of your sea extension, which began in July 1960. You will be considered in July 1961.

In all probability your added sea duty will increase the possibility of your getting your first choice when ordered ashore. Assignments are made for eligible personnel on the basis of total active service and duty preferences. As for other Navymen ordered ashore ahead of you, several explanations are possible—they could have been senior to you, have been in a different rate, or a requirement could have existed ashore in the area of their choice at time of rotation. So, your choice of duty certainly had a bearing on others being ordered ahead of you.

It is possible that if you had requested duty anywhere in the U. S., you might have received orders before—again, however, that would have depended on seniority, the number and location of requirements ashore at that time, your obligated service and dependent status.

The fact that you are serving overseas instead of afloat does have some bearing on when you will be ordered ashore. You are considered once upon completion of an overseas tour. You were considered with others completing overseas tours. Since you could not be utilized in the area of your choice at that time, you were made available for further assignment to sea duty. Rotation dates are firm, thus it was either shore duty or reassignment at sea.—ED.

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SOMETHING FISHY—Seabees G. W. Byington and E. Bridges pose with 236-pound grouper caught at channel entrance of lagoon around Canton Island.

Scuba Men Find Mystery Ship

Sir: This summer a group of 23 Scuba divers from the Empire State Council of diving clubs had the pleasure of exploring a ship said to be *uss San Diego*. She was located on an open sand bottom in about 120 feet of water, some 10 miles off Fire Island (which is on the south shore of Long Island, N. Y.).

It was difficult to identify specific characteristics of the ship since she was lying upside down, and practically all the superstructure was covered with sand—except the foremast, which had collapsed and was lying to one side, and two guns, which appeared to be about six-inch, 50 caliber, projecting from a barrette mount.

I have been unable to get either a good description of the ship, or a clear account of her loss.

One source says *San Diego* is the ex-*uss California*, an armored cruiser sunk by mines or torpedoes in July 1918. Another says she is a former battleship which sank while trying to beach on Fire Island after being hit by a German torpedo.

Incidentally, I was amazed at the lack of deterioration and rust on the hull and fittings. Very little marine growth was present, and she still had all her anchors, as well as her propellers and shafts.

It made for such an interesting dive that no one left the ship until the very last breath of air had been extracted from the SCUBAs.—CDR D.R. Ferrin, SC, USN.

• You must be like the fellows in that poem—the one about “men who go down to ships in the sea.”

Now that we’ve got that off our chests, we’re ready to get serious.

The ship you explored was apparently *uss San Diego* (ex-*California*), ar-

mored cruiser number six, the only major American warship to be sunk by an enemy submarine in World War I.

A veteran of several Atlantic convoy runs, she had just gotten out of drydock at the Navy Yard, Portsmouth, N. H., when she left there for New York on 18 Jul 1918, to begin what turned out to be her last voyage.

At about 1000 on 19 July, her lookouts spotted something that has been described as a “fast-moving barrel.” *San Diego*’s gunners fired at it a while, then it disappeared, and the ship resumed what seemed to be an uneventful trip—for wartime.

The “uneventful” cruise ended suddenly about 1105, some 10 miles southeast of Fire Island lightship. There was an explosion which blasted an opening in *San Diego*’s port side, well below the water line. The ship took a list to port as water roared in.

CAPT H. H. Christy, who assumed *San Diego* had been torpedoed, ordered the gun crews to fire in the direction where a submarine might be. The crew kept up their fire until the water got to the barrels of their guns, then they jumped overboard.

Around 1125 the ship finally rolled over and sank, bottom up. Six of the crew were lost—three of them killed in the explosion and three more who drowned. Six others were injured.

San Diego’s radio was knocked out of commission by the explosion, so two boats were sent off for Long Island to report the sinking and seek help. The boats came in at a resort called Point O’ Woods, where residents had heard the explosion and reported seeing a flash.

A Navy pilot, flying over the area, also witnessed the disaster and had reported it. Three merchant ships, ss

Malden, Bussan and F. P. Jones steamed to the rescue. They pulled 1156 survivors out of the water and took them to New York.

Afterward, there were three different theories as to what had sunk *San Diego*. Most of the opinion was divided between mines and torpedoes as the cause, but there were some survivors who thought there had been some kind of internal explosion.

Navy ships which searched the area the day after the sinking reported the sighting of six mines, and a Navy Court of Inquiry agreed with the mine theory. The laying of the mines was attributed to the German submarine, U-156.

Later information, from German records in the custody of the British Admiralty, stated that U-156 was not a minelayer. However, she had sailed for the coast of America in time to be in on *San Diego*’s sinking.

On 24 Sep 1918, when that submarine was almost back to Germany, she sent a wireless message in which she claimed the destruction of 41,600 tons during her cruise—including *San Diego*. The very next day, according to the German records, U-156 ran afoul of the American North Sea Mine Barrage and sank without any survivors.

The British Admiralty report on the matter concluded without doubt that *San Diego* was torpedoed by U-156. This theory now seems to be the most generally accepted one.

Built at San Francisco, Calif., *San Diego* had an over-all length of 503 feet, 11 inches, and her extreme beam was 69 feet, seven inches. Her normal displacement was 13,680 tons, and she was designed for a speed of 22 knots. Her primary armament consisted of four 8-inch/45s and 14 6-inch/50s. In her secondary battery she carried 18 3-inch/50s, 12 three-pounders, two one-pounders and four .30 caliber guns. She also boasted two 18-inch submerged torpedo tubes.

San Diego was designed for a complement of 47 officers and 782 enlisted men.

Launched on 28 Apr 1904, she was commissioned as *California* at the Mare Island Navy Yard on 1 Aug 1907 and fitted out as a flagship. She kept the name *California* until 1 Sep 1914.

California became *San Diego* on 1 Sep 1914, when the state’s name was given to a new battleship. Except for a bit of time in the yard, *San Diego* was Flagship of the Pacific Fleet from that month until the spring of 1917. Then she served briefly with the Patrol Force of the Pacific Fleet before leaving the West Coast in July 1917 for convoy duty in the Atlantic.

After escorting several convoys and serving as their flagship, *San Diego* entered the drydock at the Navy Yard, Portsmouth, N. H., on 30 Jun 1918. She came out on 16 July, and on the 18th, left for her rendezvous with U-156.—Ed.

The Silent Language

IT'S QUITE POSSIBLE that underwater swimming will achieve an even greater popularity than it now enjoys simply because Pete Wisher was fortunate enough to receive a two-week tour of training duty at Little Creek, Va., two years ago. It is certain that Navy scuba divers will get more accomplished and, possibly, live a little longer because of Pete.

A lieutenant commander in the Naval Reserve, Pete was glad to get his orders to the amphibious service. His Little Creek tour would give him a chance to learn more about scuba diving—and swimming was his specialty.

He had a fine time, learned a lot, met many interesting people, and became a thorough-going scuba enthusiast. However, like all other scuba divers, he was faced with one aggravating problem. He couldn't talk underwater.

No one, it seems, had done much to correct this situation. In any event, no one had come up with a practical solution. In the opinion of those who know scuba best, Pete may have done so.

As a civilian, Pete is Dr. Peter Wisher, chairman of the physical education department, swimming coach, and director of athletics at Gallaudet College at Washington, D. C. Gallaudet is famous throughout the world for its work in the edu-

cation of the deaf. Communication between people is one of its most important considerations. During the six years Pete had been in this position at Gallaudet, he had learned as a matter of practical necessity how to "sign," that is, to spell with his hands according to the American manual alphabet for the deaf.

Although the manual alphabet consists of 26 positions (one for each letter of the alphabet) of one hand, Pete had noticed that most deaf people had evolved certain arbitrary signs which conveyed a complete idea—not just one letter. Wouldn't it be possible, Pete asked himself, to adapt a very simple vocabulary based on some of these signs, which could be used by scuba divers to communicate those phrases most used by them?

Would it be possible? It would. You'll find the results of Pete's work on the following pages, accompanied by the manual alphabet.

After Pete's Little Creek experience, he returned to scuba the following year at the Underwater Swimmers School at Key West, Fla. With the aid of his scuba friends, he devised some 100 symbols which cover most situations to be found underwater. Instructors and swimmers at both Key West and Little Creek tried the idea and found that it worked. It has been adopted by

the Training Division at the Bureau of Naval Personnel and has been introduced as a part of the curriculum at Key West.

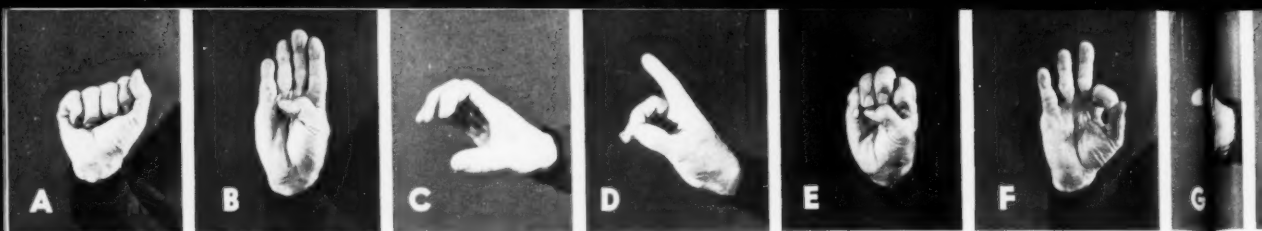
SIGN LANGUAGE is not new. It has been carried on by many people for hundreds and thousands of years. The American Indians, for example, had evolved a somewhat complicated language which transcended local dialects and enabled members of one tribe to communicate with another. In more recent days, longshoremen have created a simple set of signals which enables the man in the hold of a ship to give directions to the crane operator.

So far as is known, the Egyptians, Greeks and Romans used finger signs for numbers and on certain Assyrian monuments, it would appear that the persons depicted are trying to convey ideas with their hands. The Venerable Bede, English scholar and historian, described finger spelling more than a thousand years ago, and three manual alphabets are shown in an edition of his works published in 1532. Monks and others under vows of silence used both signs and finger spelling.

As far as is known today, the first finger alphabet adopted in teaching spoken and written language to the deaf was a Spanish one-hand alpha-
(Continued on page 36)

HANDY LANGUAGE—LCDR Peter Wisher, USNR, shows newly adopted silent language to crew of *Nautilus*, SS(N) 571.





UNDERWATER LANGUAGE



ME

Hold right hand in the D position, point index finger at your chest.



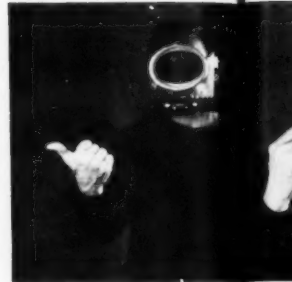
YOU

Right hand in D position, point index finger at chest of partner.



WE

Right hand in B position on right side, move to left, touching chest.



THEY, OTHERS

Right hand in A position, move hand thumb in the direction of partner's mouth.



YES, AFFIRMATIVE

Right hand in A position, move hand up and down, flexing at wrist.



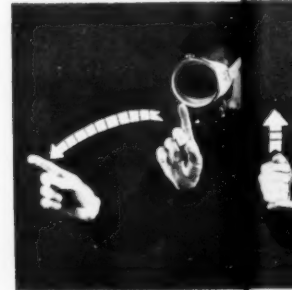
NO, NEGATIVE

Right hand in A position, thumb touching chin; move hand forward.



ERROR, BELAY THAT

Right hand in Y position; place under chin, palm facing down.



AM, IS, (verb TO BE)

Right hand in D position, move hand finger to lips, then point thumb up.



CUT, SAW

With right hand, make scissors motion crossing body to left side.



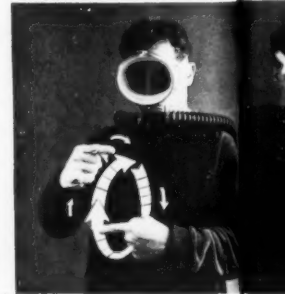
BEND, BREAK

Hands in S position, palms down; bring hands down, roll hands out.



GO

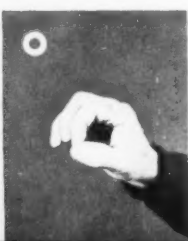
Both hands in G position chest high; rotate hands away from body.



COME

Hands in same position as GO; hands will rotate toward the left.

Prepared by All Hands Magazine





NGGE FOR NAVYMEN



HOW
Position, move hand in D position, circle motion of pen mouth with your index finger.



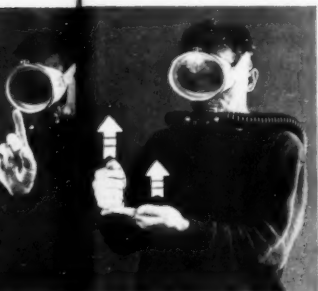
WHAT
Move right hand in D position across left hand in B position.



WHEN
Both hands in D position, make a clockwise circle with right hand.



WHERE
Right hand in D position, wave index finger from left to right.



HOW TO HELP
Position, hand in B position, right in point, wave right hand with the left.



GIVE, PRESENT
Hands close to body in X position, palms facing in; move hands forward.



LOOK, SEE, SEARCH
Right hand in V position; move to eyes, then bring the hand forward.



WORK
Both hands in S position with palms down; strike left wrist with right.



FOLLOW
Position as G, hands in A position, palms in; forward then left follows.



MEET
Hands in D position, palms in; from shoulders, bring hands close.



WANT, DESIRE
Use both hands, palms up, fingers spread; form S, draw hands to body.



DRINK
Hold an imaginary cup in your hand then bring it up to mouth.

December 1960

continued on next page



1



2



3



4



5



UNDERWATER LANGUAGE FOR NAVYMEN continued



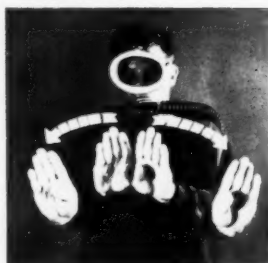
START

Left hand in V, palm in; right index in D; right index through the V.



STOP

Both hands in B position; chop left hand with edge of right.



OPEN

Both hands in B position, index fingers touching; move outboard.



CLOSE

Both hands in B position at the shoulders; move hands inboard.



IN

Left hand in C, right in O position; move right inside the left.



OUT

Reverse of IN. Right hand held by left. Pull right from left.



ON

Both in B position, left down, right up; flip right onto left.



OFF

Reverse of ON. Right finger resting on left. Move outboard.



THROUGH

Both in B position; pass right through middle fingers of left.



FORWARD, AHEAD

Right hand in B position near ear; bring the hand forward.



FAST, HURRY

Right hand in H position, palm inboard; vibrate hand rapidly.



SLOW

Both in B position, palms down; move upper hand toward body.



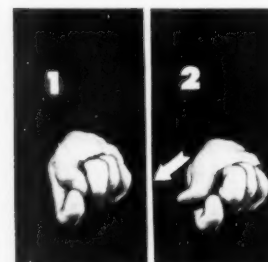
TIRED

Both hands in O at chest with palms down; swing hands down.



MANY

Both in S position, palms up; extend fingers up several times.



FEW

Right hand in E position; shoot marbles several times with thumb.



AGAIN, REPEAT

Both hands in B position; touch fingers against palm of other hand.



Letter "O" can be used as "ZERO" for indicating numbers above ten.



TRY, EFFORT

Both hands in T position at shoulder level; move down.



MISSED

Right hand in C position at shoulder; move hand past nose to left.



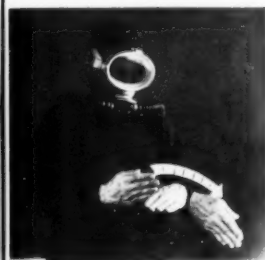
MUST, REQUIRED

Right hand in X position at shoulder; move forward in sharp jerks.



FINISH

Both in B position, palms down; follow shape of left with right.



OVER

Both hands in B position; move right hand over the left hand.



UNDER

Both in B position, palms down; move right hand under the left.



ABOVE

Both hands in B position, palms down; zigzag right hand upward.



BELOW

Both hands in B position, palms down; zigzag right hand downward.



HARD, DIFFICULT

Both hands in X position; knock right fingers against the left.



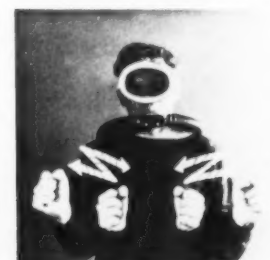
EASY,

Both hands flat, palms facing upward; brush right under left hand.



HOT

Right hand over mouth in C position; move hand away, palm down.



COLD

Both hands in S position; shoulder level; vibrate hands briskly.



SHIP

Hands cupped in B position, little fingers touching; move ahead.



HOME, EAT

With right hand in O position; bring hand up to your mouth.



FISH

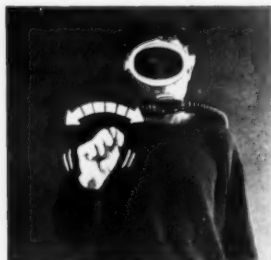
Right hand in B position, palm in; vibrate, move hand forward.



ROPE

Left hand in R position; slide right hand toward the right.

UNDERWATER LANGUAGE FOR NAVYMEN continued



TOOL

The collective term for any sort of tool is a vibrating T symbol.



WRENCH

A vibrating W symbol will refer more specifically to a wrench.



TARGET, OBJECTIVE

Both hands in D position, palms in and high; touch index fingers.



OBSTACLE

Both hands in B, fingers spread; bring together, tangling fingers.

(Continued from page 31)
bet originated in 1579.

The present language for the deaf is believed to have begun in the 18th century when the Abbe Charles Michel de l'Epee founded a school for the deaf in Paris in 1760. An improved form of this alphabet was learned by the Reverend Thomas H. Gallaudet when he visited the school in 1815. Upon his return to the United States, Gallaudet established the first school for the deaf in the United States at Hartford, Conn.

IF YOU WANT TO TRY the Wisher system yourself, here are a few tips passed on by him:

There are two parts to the sign language. The first, the manual alphabet, consists of 26 positions of one hand, each position representing a single letter. It is recommended that you learn this first, as it serves as the basis for the description of the more complete signs and any necessary word not covered in the manual can be spelled out. However, you can't learn by merely looking at the pictures. You must practice and, of course, it makes much more sense to practice with a companion.

The second portion, the signs, are

movements with the hands which represent actions, ideas or objects. They are, so to speak, a shorthand (hah!) system whereby a thought is conveyed by a single movement instead of laboriously spelling out the complete word. To say, for example, "What time is it?" you simply point to your wrist.

The same movement can convey a number of ideas, depending upon the context. By pointing to your wrist, then upward, it can mean that it is time to get out of the water. By pointing to your wrist, then holding up three fingers it could mean that it is three o'clock, or that you have three minutes more to go.

By using a combination of symbols, you can convey such messages as: "Take the hammer off the top so we can open it. Come up and help me get the line. I am tired, I need a rest. Are you hurt? No, I am cold. In the water, your biggest enemy is you." Not great literature, but it does get the idea across.

Grammatical ideas are, of course, secondary. The intent is to tell your partner what's on your mind, not to write a book.

Although the system is primarily intended to aid underwater swimmers, it can be equally well adapted

to any situation where speech or hearing is difficult or, on the other hand, where absolute silence is required. There's no reason, for example, why it can't be used in the engineroom where it's easy enough to speak, but difficult to hear. The necessity for absolute silence in peacetime is relatively rare but when it does arise, this is a convenient expedient.

It might also be mentioned that visibility is not an absolute requirement. Messages can be conveyed by sense of touch if you and your partner have earlier arranged a set of signals adapted to this somewhat awkward situation.

Furthermore, it isn't absolutely necessary to have both hands free. (One hand is useful, however.) In many cases, it's possible to send your message by using your right hand in relation to your left wrist, arm or shoulder.

Does all this sound complicated? It isn't. Men at the Underwater Swimmers School receive six hours of instruction. However, once the basic signs are learned, it is necessary to continue to practice in order to develop speed and skill.

Try it. You'll find it has many applications never mentioned by Pete.



DANGER, TROUBLE

Right hand in D position near side of head; snap fingers apart.



OK, GOOD, FINE

Hand in F position indicates the traditional sign for "All's well."



TIME

Right hand in X position, repeatedly tap back of the left wrist.



COFFEE

Clench fists, rotate one above the other like coffee grinder.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

New Fleet Ballistic Missile Sub

First ship in a new class of Fleet Ballistic Missile submarines, *uss Ethan Allen*, SSB(N) 608, has been launched at Groton, Conn.

Designed from the keel up for the firing of the *Polaris* missile, the ship displaces 6900 tons and is 410 feet long.

Named after the Revolutionary War leader of the Green Mountain Boys, the ship will displace over 1000 more tons and be 30 feet longer than the *George Washington*-class ships. *uss George Washington*, SSB(N) 598, and *Patrick Henry*, SSB(N) 599, are now in commission and soon to be deployed with the Fleet. Three more ships in this class are due to join the Fleet in 1961: *Theodore Roosevelt*, *Robert E. Lee* and *Abraham Lincoln*.

Under construction in the *Ethan Allen*-class are the *Sam Houston*, *Thomas A. Edison* and *John Marshall*—all of which will be launched in 1961. Construction on a fifth unnamed ship in this class is due to start this fiscal year.

Under order are four more ships of still another class, the *Lafayette*-class, which will be 425 feet long and displace about 7000 tons. Only the lead ship has been named.

Seawolf Is Back

When the high-speed attack submarine *uss Seawolf*, SS(N) 575, was recommissioned at New London, Conn., not long ago, she added two more "firsts" to her record.

In rejoining the Atlantic Submarine Force after more than 17 months on the sidelines, *Seawolf* became the first atomic submarine to be recommissioned, and also the first submarine to be recommissioned via telephone.

Heavy rains resulted in the transfer of the traditional dockside ceremonies indoors—to a large cafeteria a short distance from the dock. As VADM Charles Wellborn, Jr., USN, Commandant of the Third Naval District, read the orders placing *Seawolf* in commission, word was relayed by phone to the ship, where the ensign, union jack and commissioning pennant were hoisted.



CRUISER GASSER—A rare refueling occurred when *USS Saint Paul* (CA 73) pumped gas to a P5M which landed at Buckner Bay, Okinawa, to refuel.

Phantom Breaks Own Record

The Navy's fastest fighter, the F4H-1 *Phantom II* has hit 1390.21 miles per hour in an apparently successful assault on the 100-kilometer world speed record.

In the attempt at the record, the plane was piloted by CDR John F. Davis, USN, over a 62-mile circular course at Edwards Air Force Base, Calif. If the flight is recognized by the Federation Aeronautique Internationale, in Paris, it will better by more than 200 miles an hour the old mark of 1167 mph, set by Brigadier General Joseph H. Moore, in an F-105B on 11 Dec 1959 at Edwards.

The record claim was the second earned by the *Phantom II* within

recent months. In September, the Navy submitted a claim for a 500-kilometer world class record of 1216.78 miles per hour.

The *Phantom II* is a two-seat, all-weather jet fighter. It is powered by two J-79 engines, each developing more than 16,000 pounds of thrust and, if necessary, it can be flown on one engine. Scheduled to become operational this year, the plane will be armed with *Sparrow III* air-to-air missiles. It is capable of long-range delivery of either conventional or nuclear weapons.

CDR Davis was assigned to the Bureau of Aeronautics (now Bureau of Naval Weapons) in 1959 for duty on the *Phantom II* project.

YESTERDAY'S NAVY



On 10 Dec 1941 the Japanese submarine I-170 was sunk by carrier-based aircraft in the Hawaiian Islands area. On 11 Dec 1775 a committee was appointed by the Continental Congress "to devise the ways and means for furnishing these Colonies with a Naval Armament." On 14 Dec 1944 the rank of Fleet Admiral was established. On 20 Dec 1861 the First Stone Fleet, composed of 17 vessels loaded with rocks, was sunk at the entrance to Charleston Harbor, S.C., in an effort to bottle up that Confederate port. On 21 Dec 1864 the rank of VADM was created.



KING-SIZE SHAMPOO — Carriermen of USS Coral Sea (CVA 43) man the swabs as they give the flight deck of their flattop a scrubbing on the high seas.

Guided Missile Ships

Four U.S. Navy guided missile ships now under construction have moved past the numbers stage—they now have names.

Two of the ships are guided missile destroyers. DDG 15 has been named *Berkeley* and DDG 18, *Semmes*.

Berkeley is named for Major General Randolph C. Berkeley, USMC, a Medal of Honor winner. He entered the Marine Corps in August 1898 and served for 41 years. Commanding the First Battalion of the Second Advanced Base Regiment at Vera Cruz, he distinguished himself in action to earn the nation's highest award for heroism.

Semmes is named for Commander Raphael Semmes, USN, (later Rear Admiral, Confederate States Navy). He was appointed a midshipman in 1828 and rose to the rank of Commander, USN. At the outbreak of the Civil War he resigned his commission and was appointed a Commander in the Confederate States Navy.

During that war he commanded *css Sumter*, and later *Alabama*. In June 1864, *Alabama* was sunk in battle with *uss Kearsarge*. In February Semmes was promoted to Rear Admiral and took command of the James River Squadron.

The other two ships recently named are guided missile frigates. DLG 18 will be commissioned *uss Worden*, and DLG 19 will become *uss Dale*.

Worden is named for Rear Ad-

miral John L. Worden, USN, who commanded *uss Monitor* in the world's first battle between ironclad ships. After he was promoted to Captain, he commanded the ironclad *Montauk*, which destroyed the Confederate cruiser *Nashville*. Later he served as superintendent of the Naval Academy.

Dale is named for Commodore Richard Dale, USN, who was First Lieutenant of *Bonhomme Richard* under John Paul Jones when he captured *Serapis* in December 1779. During 1781-1782 he commanded *Queen of France* and made several captures. Commodore Dale was appointed a midshipman in 1776, and served in the Navy for more than a quarter of a century.

Field Day for Forgotten Sailors

Thanks to the efforts of crew members of two DesRon 10 destroyers, an aged "Cementerio Ingles" in the Mediterranean is now in a much improved condition.

The cemetery is at Mahon, chief city of Minorca, Balearic Islands. Mahon is located on a sheltered inlet about 150 miles southeast of Barcelona, Spain. It was here that *uss Forrest Sherman* (DD 931) and *Charles H. Roan* (DD 853) visited during their recent Med tour.

For many years during the first half of the last century Mahon was the Headquarters of the Navy's Mediterranean Squadron. Over the years some 28 U.S. Navymen came to be buried in the city's cemetery.

The site had no caretakers and was almost forgotten. Learning of this, volunteers from the two ships came forth in typical destroyerman manner and devoted about 250 man-hours to making the place shipshape.

Fenced in by an eight-foot-high stone wall, the cemetery is in the direct path of the winter floods, which sweep down the valley to the sea. To dispose of these waters a primitive drain of stone construction running under the cemetery has been built in the past. However, by this time the drain had dropped at one point and was blocked.

The *Sherman* and *Roan* sailors cleared the drain. They built up the walls, using the original stone blocks. In all, they held a field day on the place, clearing away scrub grass, tidying up paths, and removing rubble.

After clearing away the scrub and over-growth, it was possible to get a good look at the many tombstones. Some bore clearly legible inscriptions, other were without markings, some had "American Sailor Name Unknown" stenciled in black paint. Some graves had slate inscription tablets damaged beyond recognition.

The buried U.S. Navymen came from the frigates *Constitution*, *Congress* and *Constellation* and the ships-of-the-line *Delaware* and *Philadelphia*.

Three Ships, Three Rescues

For three Navy ships, rescues at sea were the order of business during a recent weekend.

In the Pacific about 1000 miles east of Hawaii was the Republic of China destroyer *Hsiang Yang*. Aboard was a Chinese lieutenant in desperate need of an appendectomy. *uss Los Angeles* (CA 135) reversed course, made rendezvous and high-lined the sick man aboard. There he spent nearly three hours on the cruiser's operating table for a successful operation.

In the Atlantic, off Greenland, were two Danish mining engineers adrift in a small boat in an iceberg-laden fjord. After eight days they were discovered by helicopters from *uss Atka* (AGB 3). Rescue vessels were directed to the area.

In the Med off Piraeus, Greece, two persons were adrift in a disabled powerboat. They were spotted by an officer aboard *uss Gainard* (DD 706). The ship took the craft in tow and delivered it safely to Piraeus.

Fire-Fighting by Helicopter

A new airlift-type dry chemical fire extinguisher is now in use at air stations and air facilities throughout the Navy. It was developed for BuWePs jointly by the Naval Research Laboratory and a commercial fire equipment concern.

The unit weighs 800 pounds, has a large nitrogen pressure cylinder and two 75-foot lengths of three-quarter inch hose. Its chemical is a dry-powder type—either sodium bicarbonate (CDC powder) or potassium bicarbonate (Purple K powder).

Though it can be mounted on a pickup truck, its main use will be for crashes occurring off the airfield. In such cases it, as well as fire fighters and rescue men, will be airlifted by helicopter to the scene of the crash.

The dry chemical, which is considered an excellent agent for quickly knocking down the flames, is helped by the downwash of the helicopter.

The chopper hovers over or near the crash, the downwash of the rotor driving the flames downward and away from the plane's cockpit area. Further, the rotor's downwash aids the firefighters and rescue men by deflecting the intense heat and dense smoke of aviation fuel fires.

Army Men Get a Taste of Navy

For one Army Reserve outfit it was Navy-Navy-Navy during their recent period of active service training.

The 410th Engineer Command (Amphibious Support) boarded USS *General G. M. Randall* (AP 115) at New York and arrived, soon after, at Hampton Roads, Va. This in itself was noteworthy, for it marked the first water-borne movement of an Army Reserve unit to summer training in Army Reserve history.

Taking their training at the Naval Amphibious Base, Little Creek, Va., the soldier-engineers observed and practiced the basic military skills of an amphibious operation. They were familiarized with the various ships and landing craft employed in landing and supplying the landing force. They took part in a landing on the beaches along Hampton Roads, coming ashore in amphibious tracked vehicles. And they loaded and lashed equipment aboard ship, debarked down the ship's side, and set up shore-side installations to support the assault.

As a result of their training at Little Creek, new training cycles have



HISTORICAL NOTE—LT John McGuire, USN (Ret.), recently resigned as manager of Truxtun-Decatur Naval Museum, explains rigging to visitors.

Retired Chief Is Manager of Truxtun-Decatur Museum

New manager of the Truxtun-Decatur Naval Museum is Casimer L. Kasey, HMC, USNFR. He replaces LT John McGuire, USN, (Ret.), who resigned recently because of ill health.

The new director transferred to the Fleet Reserve in December 1959. During a 20-year naval career, Chief Kasey served aboard five capital ships, plus several LSTs, and participated in the invasions of North Africa, Sicily and Italy.

LT McGuire retired from the Navy in 1947 after 32 years' active duty. In that time he advanced from apprentice seaman through the Warrant Boatswain grades to commissioned status. He served on more than 10 ships, and had

three hitches of recruiting duty.

Truxtun-Decatur Naval Museum is located at 1610 H street, N.W., just a stone's throw from the White House in Washington, D.C. A mecca for naval historians and anyone interested in the history and past glories of the sea services, it was established in May 1950 by the Naval Historical Foundation, a private, self-supporting organization dedicated to the preservation of America's maritime history.

Next time you visit Washington, Museum Manager Kasey will be happy to show you around the historic exhibits, ranging from John Paul Jones' recruiting poster for his ship *Ranger*, to the developing of seapower into the nuclear age.

begun at the Engineer Command's Reserve Centers—located chiefly in the New York City, Long Island, Binghamton, Albany and Watertown areas of the Empire State.

Drill Team Is On Its Toes

NAS North Island's Precision Drill Team has been organized less than a year, and made only ten competitive appearances, but in that short span it hasn't let much grass grow under its marching feet.

The 13-man outfit has already piled up 10 awards—seven first place, one second place, and two participation trophies—and recently topped

all its previous efforts by marching off with the 1960 California State Open Championship.

North Island racked up an overall average of 95.2 per cent out of a possible 100 in outdrilling teams from Naval Station Treasure Island, NAS Oakland, Stockton Reserve Fleet, Sixth Army Headquarters and the Sixth Army Signal Corps in the state meet at Santa Clara.

Team Captain Ken Kveseth, AD3, USN, also copped an individual trophy awarded to the outstanding senior drill captain.

Daniel Lucas, AO1, USN, is drill instructor of the marching unit.



MCB-3 SEABEES hold military training sessions on Okinawa. Rt: Tent over frame will protect precasts from rain.

Seabees Busy at Futema

The U.S. Marine Corps now has an air facility at Futema, Okinawa, thanks to three years' work by the Seabees of Mobile Construction Battalion Three. Although the construction will not be completed until the summer of 1961, the installation was commissioned in January 1960, and the main body of Marine Air Group 16 has already shifted its headquarters there from Japan.

Before construction started on this air base, which will house five Marine helicopter squadrons, the Seabees had plans—1000 sheets of them. They also knew that the installation would cost some eight million dollars and would require about 25,000 separate construction items.

The Seabees had a million dollars worth of equipment ready to do the job, plus some \$40 thousand worth of dynamite to help clear building sites.

The completed 1000-acre facility at Futema will have some 20 barracks, 10 BOQs, a mess hall and galley, a Marine Corps exchange, gymnasium, theater, chapel, infirm-

ary, three enlisted men's clubs, a communications building, five administration buildings, four hangars and a maintenance annex, an operations and control tower building, warehouses, a fire and crash building, a small-arms magazine and a complete petroleum and oil system. A \$50-thousand automatic sprinkler system will protect these buildings.

Futema's concrete supply and storage warehouse is built to withstand tropical rains and 140 mph typhoon winds. It has a shell (framework) of pre-cast concrete bents (The part of the frame which runs lengthwise—it generally supports both the lateral and vertical weight of the building), and the roof and wall panels are tied together with large poured-in-place concrete T beams. The end sections, which weigh 54 tons each, were among the largest pre-cast panels made on the island.

One of the most difficult construction jobs was the enlisted mess hall and galley. Although most of the local American and Oriental contractors agreed that a one-piece, 30-ton, 52-foot pre-cast frame could not

be raised in one piece, the Seabees did it.

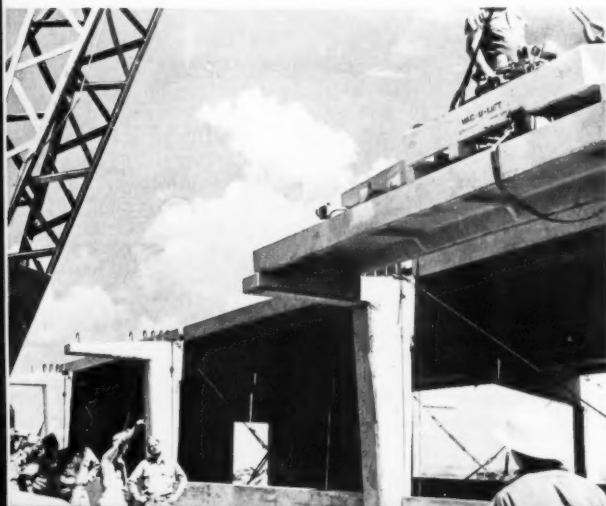
The Seabees also built a network of electrical installations at Futema which includes a 69,000-volt, 40-ampere, main-line switching station and a master sub-station, both with 60-foot towers. Power is distributed not only to Futema, but also to nearby U.S. Army Nike sites and to a Marine Corps staging-out area being completed at Sukiran, some seven miles away.

Water for the Futema Facility comes from a high-level water reservoir at Sukiran. First the water travels through a 16-inch pipe, then is diverted through 11,000 feet of 12-inch pipe before it reaches the Air Facility.

The equipment operators (EOs) at Futema had one of the biggest jobs to do. They:

- Were responsible for the operation, refueling, repairing and maintenance of over 300 pieces of equipment used by the Seabees at Futema.
- Transported more than 500 Seabees daily on their 15-mile round

MOVING IN—Seabees of Mobile Construction Battalion Three man heavy equipment to move wall and roof panels.





MIX UP—Seabees guide cement bucket to make roof. **Rt:** Truck pours concrete among precast beams of a hangar.

trip to and from the construction site.

- Prepared the construction sites for 65 buildings.
- Provided adequate drainage systems for the construction site.
- Crushed some 144,000 tons of coral for construction material.

Most of the 65 buildings at Futema were prefabricated—but not pre-fabs as we generally think of them. Concrete slabs were poured in molds on the ground and, when ready, were lifted into place in one piece. In many buildings, such as the 20 barracks and the administration building, the entire shell was made of pre-cast concrete material. When MCAF Futema is completed, there will be more than 5000 pre-cast roof panels, 800 wall panels and 200 rigid pre-cast bents. If these roof panels were laid end to end, they would make a sidewalk eight feet wide and almost 20 miles long.

At times the Seabees adapted their equipment to special jobs. One problem involved lifting the concrete slabs from the molds. To do this job, they took standard lumber carriers

(sometimes called straddle trucks), widened them, and equipped them with vacuum lifts. The carriers would straddle the molds, lift the pre-cast units, and carry them to storage yards or construction sites.

One of the major problems in designing Futema was to provide typhoon protection for the Air Group's helicopters. The building had to be strong enough to withstand 140 mph winds which often sweep across the island.

Some 41,000 man-hours were spent building four hangars about 94 by 118 feet for this purpose. Apparently the Seabees were successful because the hangars have already withstood the powerful force of a typhoon.

Another busy group of Seabees were the riggers (EOs and SWs). The Futema project demanded skilled rigging crews for both the tilt-up and positioning of large pre-cast walls and covering panels.

Riggers lifted end wall units that weighed up to 60 tons and placed them into position. End units for the maintenance shop were 52 feet long.

The riggers' skill was also demonstrated when they erected the shell for a 212-by-35-foot barracks in three days. The Seabee EOs and SWs also erected steel aviation and mobile gasoline tanks, electrical transmission towers, switching stations, and the huge 35-foot sliding doors for the helicopter hangars.

The officers and men of MCB-3 are now working on the final phase of construction at Futema.

Fred W. Doby, JO1, USN.

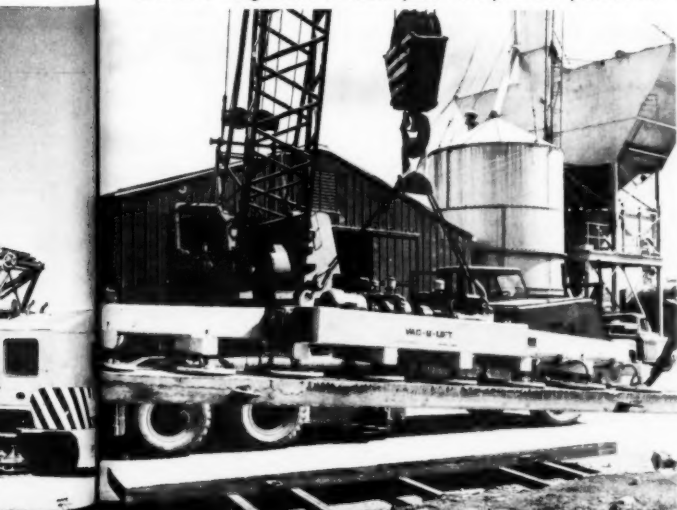
Submariners Have Style Winner

The coverall created for the men of the Navy's *Polaris* submarines has won a Caswell-Massey Award for "Excellence in Design."

The award, one of several made annually, was in the Special Design category. It was presented to Mr. Seymour Lash, Branch Chief in the Clothing and Textile Division of the Naval Supply Research and Development Facility, who conceived and executed the *Polaris* suit.

Developed to conserve space, reduce the use of laundry facilities and improve submarine habitation, the

BIG LIFT—Eighteen vacuum pads lift precast panel. **Rt:** Precast units were poured in the forms in the foreground.





TIME RUNS OUT—Buzzards Bay Lightship will be among first replaced.

Light Towers to Replace USCG Lightships

A sight familiar to Navymen for many decades is due for a change. Lightships, swinging to the hook and marking dangerous coastal shoals or entrances to important harbors and estuaries, are scheduled to be replaced with skeleton structures of the Texas Tower type.

Like the lightships, the off-shore structures will be maintained by the Coast Guard and will be equipped with lights, fog signals and radio beacons. They will be of two types, manned and un-manned, the latter being controlled from the shore.

Aboard the manned towers will be living quarters for the crew of five Coast Guardsmen. The roof will act as a landing platform for helicopters.

The first two vessels to be replaced will be the Buzzards Bay Lightship, which guards the southern approach to Cape Cod, Mass., and the Benton Reef Lightship, which, located just off Rhode Island, stands watch at the eastern approaches to Narragansett Bay.

A study by the Coast Guard has shown the value of the skeleton-beamed off-shore towers used by oil and sulphur producers in the Gulf of Mexico and elsewhere. Other factors in the changeover to towers are lower maintenance costs, longer life spans, and the increasing age of the lightships.

Construction of the Buzzards Bay structure will start in 1961. Plans

are for it to be completed within a year. In time, all but two of the present 24 lightship stations will be replaced by light towers.

Skeleton light towers in relatively shallow waters, such as in the Florida Keys, have withstood hurricane winds and waves for almost a century.



NEW ISLANDS like above will take the place of most of the lightships now guarding harbors.

suit is made of dacron, rayon, cotton and nylon. Easy to launder, it dries rapidly without releasing much moisture into the submarine's closed atmosphere, and can be ready for use in a few hours. Only two sets of these coveralls will be carried by each crew member during a 60-to-90-day patrol.

Although the suit is made in one piece, it has the look of a shirt and trouser combination. The shirt portion is made of a dacron-rayon fabric, and the trousers are a dacron-cotton twill. Parts of the suit—around the waist, back and side areas—are in a stretchable nylon rib knit, making it possible for only three different sizes of the suit to fit almost anyone.

The result is a comfortable semi-fitted coverall which allows complete freedom of movement.

Touring Teachers

Two Chief Aviation Electronics Technicians are having a six-month "grand tour" of Europe that's saving the Navy more than 30 thousand dollars.

Normally assigned to the Naval Air Mobile Training Group at Memphis, Tenn., the traveling two are ATCs George M. Dain and William A. Lind. They left Memphis in June with 1000 pounds of luggage, and are saving the government money by visiting Spain, Italy, England, Morocco and Sicily to take a school to its students, instead of waiting for the Navy students to come to them.

Their luggage—made up of tools, mock control panels, electronic test equipment and text books—is, in effect, a mobile classroom for teaching Navymen overseas how to handle transistorized electronic equipment.

First stop on their tour was Port Lyautey, and after that came the Spanish-American Naval Base at Rota, where Dain and Lind conducted five of their two-week courses in transistor fundamentals. London, Naples, Sicily and the Azores were also on the itinerary the pair were scheduled to follow before returning to the United States.

The two-week course taught by Dain and Lind consists of 80 hours of technical and practical training in handling transistorized equipment. Each class is limited to 10 students.

By the time the two touring teachers were to return to their home base, they were slated to travel almost 11,000 miles and to instruct

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nearly 250 students at various Euro-
pean bases.

The nearest school offering similar training is at Norfolk, Va., so Dain and Lind are saving the Navy the heap of money it would take to send the students there.

Spare Tires for Ships

Some of the ships of the Mine Force, Pacific Fleet, are now carrying a spare tire. You'll see them sporting the new addition on their fantails, but the shape is different and it's being used for a different purpose.

MINPAC's "spares" are really a new type of collapsible rubber fuel tank which increases the steaming range of ocean-going minesweepers by as much as 15 per cent.

Filled to its 2500-gallon capacity, the eight-foot by seventeen-foot by three-foot fuel cell closely resembles an inflated air mattress. A simple padeye-connected rigging is used to lash it in place on a minesweeper's fantail. It's inexpensive, requires no extensive ship alterations and, best of all, can be folded and stowed when not in use.

On long voyages in the past Mine Force ships have had to carry their spare fuel in 55-gallon drums. They cluttered up a good share of after deck space, were cumbersome and time-consuming to handle, and added significantly to the ship's magnetism—definitely not a good thing during mine-sweeping operations.

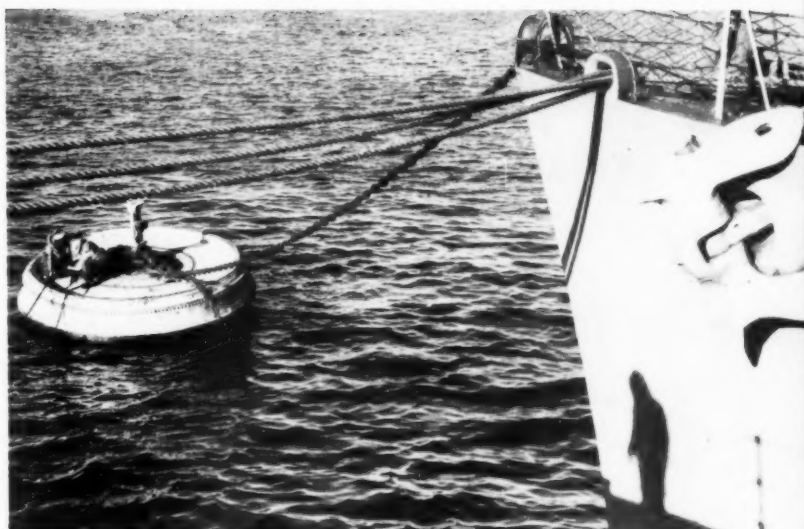
The sea-going spare tire has changed all that.

All-Navy Golf

ENS Jordan Ball, USN, stationed at the Richmond, Va., Naval Recruiting Station, is the 1960 All-Navy open golf champion.

ENS Ball toured the Army's long and beautiful Fort Ord, Calif., layout in rounds of 74-72-75-76, with his final 297 total giving him a two-stroke bulge at the finish over 1958 champ LTJG Rudy Boyd of NAS Pensacola, and LCDR Ben Hastings, medical officer of the Fleet Ballistic Missile submarine *uss Theodore Roosevelt*, SSB(N) 600, who wound up in a dead heat with 299's. LTJG Boyd posted a four to LCDR Hastings' five in a one-hole, sudden-death playoff to cop runner-up honors.

Tied for fourth with even 300's over the 72-hole, four-day grind, were LT Don Knight of 13 ND, and 14 ND's John Kalinka, ET1. LTJG



TIED UP—Two destroyer men pass line through ring on buoy and start it back to their ship to haul out the anchor chain in Narragansett Bay, R. I.

Tony Earle of the Special Weapons Facility, Yorktown, Va., and ENS Alan Gilson, representing Staff, 12 ND, deadlocked for fifth place with 302's, while another recruiter, Chief Personnelman John Babuka of Nav-CruitSta Albany, N.Y., shot a 305 for sixth.

In the Senior (age 45 and over) Division, meanwhile, LCDR Louis Anderson from NavSta Annapolis, Md., fired a 79 over the final 18 holes to overcome a five-stroke deficit and win the All-Navy Senior crown.

Staff 12 ND's LT Nancy Hollenbeck won the women's All-Navy title with rounds of 94-92-98, for a 54-hole total of 284.

USS Princeton's Pistol Expert

If the contestants at a recent National Rifle Association pistol match at the Los Angeles Police Academy could have, foreseen what was about to happen, they probably wouldn't have let SSGT Donnie L. Romine, USMC, in the building.

When the dead-eye Marine finally laid his smoking pistols down he'd won 12 of 16 matches, and made off with practically all the loot.

Romine, a member of the Marine Detachment serving in the amphibious assault ship *uss Princeton* (LPH 5), has been firing competitively less than a year. Recently classified a sharpshooter, he reached his peak in the Los Angeles match—among other things copping the trophy for his

grand aggregate score of 2416x2700.

Other firsts racked up by the *Princeton* Marine were in the Center Fire Slow, Timed, Rapid, National Match Course and Center Fire Aggregate matches with both the .38 and the .45, and the Aggregate Slow Fire with the .22, .38 and .45.

Sailboat Racing Champs

The Read Cup, symbol of the British and U.S. Navy champions in sailboat racing, is on display at the headquarters of the Commander-in-Chief, Atlantic Fleet, in Norfolk these days, thanks to a group of officers from U.S. Second Fleet ships and Headquarters, CINCSNAVEUR (Commander-in-Chief, U. S. Naval Forces, Europe).

They combined forces to down their Royal Navy counterparts in two, three-hour races over a triangular, 12-mile course at the Royal Albert Yacht Club in Portsmouth, England, to gain possession of the British-American Naval Sailing Trophy.

The Read Cup was devised and donated by its namesake, CAPT S. A. Read, CBE, RNR, in an effort to enhance sailing rivalry between naval officers of the two countries whenever and wherever an opportunity occurs.

A total of six boats were used in the races, three by each side. Four of them were 38-footers with 50 square meters of sail, while the other two were 26 and one-half footers of the Belmore class.

SERVICESCOPE

Brief news items about other branches of the armed services.

TOMORROW'S U.S. ARMY rifleman will be able to see farther and better, in the dark, to spot an enemy than his World War II counterpart. He'll do it with the T-1—a newly developed, lightweight "sniperscope" infrared gun sight, designed to expose night-hidden targets and to take the load off the rifleman's back.

Instead of the cumbersome, 28-pound WW II-model sniperscope and back-carried battery supply load, future infantrymen will carry a 13-pound unit. The power supply, miniaturized to one-eighth the size of the old version, will hook on the rifleman's cartridge belt.

Target image on the new sighter is twice as big as that provided by the old-style model, giving more positive identification of the quarry. It will also make it much easier to detect enemy camouflage attempts.

Teamed with modern infrared battle techniques, the T-1 will also give a marksman added protection against enemy fire. The WW II sniperscope, with its power supply permanently attached, emitted its own infrared signals, aiding enemy detectors in "zeroing in" on its user.

Now, a central infrared searchlight can spray a wide battlefield sector with its rays. A T-1-equipped rifleman could unhook his power supply and use only the lightweight receiver portion, keeping him hidden from enemy IR detectors.

The new scope has been designed for use with virtually every individual weapon now employed by combat infantrymen.

★ ★ ★

THE AIR FORCE BMEWS (Ballistic Missile Early Warning System) station at Thule, Greenland, is now in operation.

The Thule station is the first of three planned to provide early warning of ballistic missile attack. The other two sites are at Flyingdales in the United Kingdom and Clear, Alaska. At both of them work is progressing at, or ahead of, schedule.

The huge antennas for the sites will pick up a missile at a range of 3000 miles. The radars each require as much electricity as a small city does.



MUSH ON—Army vehicles take off over Greenland icecap during operation Lead Dog to establish overland routes.



BIG BLAST—Light weight M55 weapons system developed by Army can fire potent rapid salvo of 45 rockets.

A NUCLEAR RESEARCH REACTOR capable of providing short pulses of intense nuclear energy will be installed next year at the Army's Diamond Ordnance Fuze Laboratory in Washington, D.C. It will be used to study radiation effects on parts of military equipment.

Actual location of the reactor, which will cost slightly less than \$1,000,000, will be in the Forest Glen section of the Walter Reed Army Medical Center, Forest Glen, Md. The installation will be known as the Diamond Ordnance Radiation Facility.

The TRIGA—Training Research Isotope (Production) General Atomic-reactor core will be suspended from a movable carriage which will permit equipment to be exposed in either a dry, shielded exposure room or in a water-filled pool. Lead shielding doors will separate the exposure room from the pool area. This will give access to the exposure room while the core is being used for other experiments in the pool.

The reactor core for the Radiation Facility differs from the standard TRIGA reactors. It will contain more fuel elements of a special design, in a new core configuration, and, in addition, the reactor will use water instead of graphite as a reflector.

★ ★ ★

THE AIR FORCE will put 17 Air National Guard communications and electronics installations and maintenance squadrons to work during active duty training periods next summer, assisting in the development of communications facilities at its ballistic missile and test sites throughout the U.S.

The two-pronged program will be aimed not only at providing ideal training to fit Air Guardsmen for their mobilization missions, but at extracting double value from the defense dollar as well. A majority of the Guardsmen will be well qualified for ground communications and installations work, since they are employed by telephone and telegraph companies and other electronics industries in civilian life.

Working directly under the Air Materiel Command, the ANG squadrons will perform many of the communications and electronics installation functions required by the Air Force in its missile and satellite programs.

The summer 1961 training missions will mark the first large-scale participation by ANG units in the

nation's missile and space efforts. Involved will be two communications maintenance and 15 GEEIA (Ground Electronics Engineering Installations Agency) squadrons.

★ ★ ★

ARMY SCIENTISTS have developed a distance measuring device which may benefit Arctic explorers and scientists in pinpointing their location.

Known as an *attenuation meter*, the device measures the atmospheric conditions which affect visibility.

These conditions produce optical illusions distorting the size and shape of objects which make it impossible to gauge the distance from one location to another. The meter measures the length of the path between the observer and the horizon.

The meter requires 110 volts AC and works somewhat like an exposure meter used by photographers, but is much more sensitive. One of its two photoelectric circuits measures the amount of light coming to the instrument from the distant horizon. The other circuit measures the brightness of the air path between it and a black spot. Both values are registered on a meter. From these values, the distance at which the same black spot could not be seen by the eye can be calculated.

In an earlier version, the Army's visibility meter was a bulky instrument measuring about 15 feet in length. The new type scheduled for further testing on the Greenland Ice Cap this summer is much more compact in size and can be carried easily in a snowcat or similar vehicle adapted for Arctic travel.

★ ★ ★

THE AIR FORCE PLANS to add more firepower to its F-105 *Thunderchief*, Tactical Air Command's newest globe-girdling tactical fighter, by arming it with the air-to-surface *Bullpup* missile.

It is developing a prototype launcher which will be mounted on pylons beneath the F-105's wing. Thus equipped, an F-105 pilot could launch *Bullpup* more than two miles away from a target. A radio-link guidance system controlled from the cockpit would steer the missile to its destination.



HOT SNOW?—Member of Army Chemical corps takes radiation fall-out readings on Greenland expedition.



NO MONKEY BUSINESS—USAF school at University of Kentucky teaches chimps how to 'operate' space capsule.

The present model of *Bullpup*, the GAM-83A, is fitted with a high explosive warhead. An advanced version, the GAM-83B, will be able to carry either a nuclear or conventional payload.

★ ★ ★

DUTY-ASSIGNMENTS-BY-NAME of Army enlisted personnel went into effect this fall. Long a procedure in Navy enlisted assignments, the new Army step is intended to centralize control of enlisted personnel resources, improve their utilization and assist in the continued automation of the Army's replacement system.

"Overseas returnees" will be the first affected, followed by those chosen for overseas service. The program will, eventually, include all assignments. Returnees from overseas will be given increased opportunities to state preferences in geographical location.

Also involved will be an increased equality in selections for overseas tours. Army-wide considerations for such assignments will point toward the man (of a given military occupational specialty and pay grade) who has the longest time in the States. In other words: "First back stateside, first over, overseas."

The new program has some important management features of benefit to the individual soldier. For example, a man in a surplus skill will be given an increased opportunity to get into a field where his additional skill is needed.

★ ★ ★

A 30-DAY FLIGHT TO THE MOON and back has been made by an Air Force captain and first lieutenant. The flight was a simulated one, however, and the officers never left Texas.

Latest in a series of simulated space flights, this was the third major test designed to show that the human body is capable of withstanding space frontier hardships.

In the preceding test two Air Force sergeants stayed in the test cabin for 13 days and 20 hours.

Home for the officers' venture was a small steel pressurized cabin measuring 8 by 12 feet. The cabin is at the U.S. School of Aviation Medicine, San Antonio, Tex.

Machines used for the first time in space cabin tests enabled the two officers to drink and reuse the same water and to breathe and re-breathe the same air.

THE WORD

Frank, Authentic Advance Information On Policy — Straight From Headquarters

• **APPLICATION FOR FLIGHT TRAINING**—If you want to go to flight training, now is your chance. Applications are desired from officers for classes that convene weekly at Pensacola, Fla.

Applicants must be less than 26 years of age at the time of application, must be physically qualified and must have a minimum of four semesters of undergraduate work at an accredited college or university.

You will find more details concerning qualification and the procedures for submitting your application in BuPers Inst. 1520.20A.

• **NAVY COMMENDATION MEDAL**—If you wear the Navy Commendation Ribbon, you now have the Navy Commendation Medal, not a Commendation Ribbon with Metal Pendant. The name of the award has been changed to avoid confusion.

In the past, if you were awarded a Letter of Commendation, it was either with or without a ribbon with metal pendant. Now you simply get a Letter of Commendation or a Navy Commendation Medal. It's a simple name change. The criteria for the Navy Commendation Medal are the same as those for the old Commendation Ribbon with Metal Pendant.

If you already have the ribbon with metal pendant it should be worn as before, but referred to as the Navy Commendation Medal. Also changed was the method of marking additional awards on the ribbon. If more than one commendation medal is awarded, a gold star should be worn on the ribbon in lieu

of another medal. In the past, additional awards have been marked with bronze stars.

More details may be found in SecNav Inst. 1650.1A change transmittal of 21 Sep 1960.

• **QUALS MANUAL**—The *Manual of Qualifications for Advancement in Rating*, NavPers 18068 (Revised), has been changed to cover the new rating of postal clerk and to bring the quals up to date for ten other ratings. The changes will be in effect for the February 1961 advancement examinations.

Postal clerk, a new General Rating, has been added to Group V—Administrative and Clerical. The other ratings for which the quals have been revised are: Yeoman, Personnel Man, Lithographer, Aviation Machinist's Mate, Aviation Fire Control Technician, Aviation Boatswain's Mate, Aviation Electrician's Mate, Aviation Structural Mechanic, Trainedman, and Dental Technician.

The revisions were made under Change No. 15 to the Manual.

• **REQUIREMENTS CHANGE FOR NAVCAD**—You no longer need to serve one year on active duty before you qualify to apply for the Naval Aviation Cadet Program.

The Chief of Naval Personnel has suspended the one-year requirement until 30 Jun 1961 so that more qualified enlisted men can enter the program.

At the same time, enlisted men are being encouraged to submit their applications for the NavCad Program in accordance with BuPers Inst.

1120.20B. The one year active duty change was published as Supplement One of that instruction, dated 26 Sep 1960.

• **EXTEND FOR BONUS**—If you're Regular Navy and extend your enlistment for two or more years—even one year at a time—you may now receive a bonus for it. The extensions will, however, count as a reenlistment when computing future reenlistment bonuses.

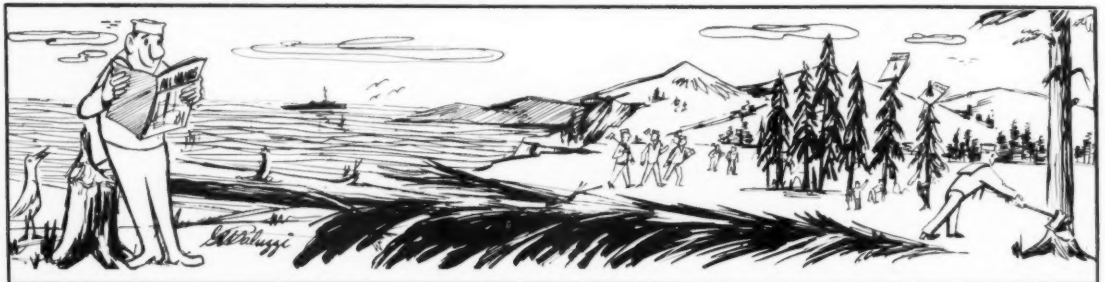
Under the old pay bill (section 207, Career Compensation Act of 1949), no reenlistment bonus was paid for a one-year extension of an enlistment. But if an enlistment was extended more than once, the extensions were considered a reenlistment and a reenlistment bonus was paid.

Under the new pay bill (section 208 of the same Act), however, a member was not entitled to a reenlistment bonus for a one-year extension or even two one-year extensions. He was entitled to a reenlistment bonus only for extensions of two or more years.

The Comptroller General of the United States has recently ruled that a bonus should be paid for two or more one-year extensions under the new pay bill.

Here's how the new pay bill has been interpreted by the Comptroller General:

• If you extend your enlistment for one year, you receive no bonus at that time. But, if you extend that same enlistment for the second time, you can get paid for the one year already served, plus the one for which you have agreed to serve. Should you then extend for a third one-year term, you are entitled to a reenlistment bonus for a three-year extension, less any money you have already received for extending that enlistment. In any case, the bonus is based on the rate of basic pay to



CHOP CHOP—ALL HANDS doesn't usually grow on trees. That's why we ask you to pass this copy on to nine others.

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which you were entitled on the day your original enlistment expired.

- If you have already served one or more one-year extensions, you may now request a bonus for those you have served, plus those for which you have agreed to serve. Further, you may now elect to receive a bonus under the new pay bill even if you have already been paid for your extensions under the old pay bill. In this case, your bonus will be refigured and you will receive the difference.

SecNav Inst. 7220.37A, which announced the Comptroller General's decision, emphasized that regardless of whether a reelection is now made and additional payment is claimed, two or more one-year extensions will count as a reenlistment when figuring the number of reenlistments for future reenlistment bonuses.

- **POSTAL CLERKS SELECTED**—The new rating of Postal Clerk (PC) has taken a big step forward with the selection of personnel for the rating. Some 644 in number, the Navy's first PCs have been selected by a board of officers that met at the Bureau of Naval Personnel during August and September. (Names of the selectees were published as an enclosure to BuPers Notice 1430 of 28 Sep 1960.)

The new PCs are in pay grades E4 to E7. The majority had been Telemen before the phasing out of that rating, which began in 1957.

PCs operate Navy post offices. They perform postal counter work including sale of stamps and money orders; process incoming and outgoing mail; maintain mail directory postal equipment and security of postal effects and mail matter. They prepare and file correspondence and reports; load and unload vehicles in the transportation of mail; and operate, supervise, organize, establish or disestablish Navy post offices.

"Navy Postal Clerk" and "Assistant Navy Postal Clerk" are terms that refer to personnel who carry out duties in a Navy post office. These terms apply to individuals specifically designated as such. Commanding officers will utilize members of the new Postal Clerk rating in postal billets whenever practicable. Where members of the Postal Clerk rating are not available, commanding officers will designate men of other ratings to serve as Navy Postal Clerks or Assistant Navy Postal Clerks. Further details of the rating

change are listed in BuPers Instruction 1440.26.

- **LAY LEADERS**—Religious lay leaders are an official part of the Navy, and fill a valuable role in smaller ships and units which do not have full-time billets for chaplains. Although these men have conducted religious services aboard Navy ships for many years they have had few guide lines to follow.

The Chaplain's Division at the Bureau of Naval Personnel realized this and, on 22 Sep 1960, BuPers Inst. 1730.6 was issued to provide these guide lines. The following regulations for religious lay leaders were established:

Lay leaders will conduct an orderly service and will refrain from formal preaching, specialized counseling and other activities which are normally only conducted by an ordained minister. Lay leaders may not administer sacraments aboard naval ships or activities.

Offerings will not be taken at lay conducted services.

Commanding officers have been instructed to insure the selection of lay leaders who are well qualified and devoted men. Particular care in screening personnel will avoid the possibility of selection of men who might use their positions as lay leaders to expound original theories or singular views.

Chaplains will assist lay leaders whenever possible by consultation, instruction, and by furnishing ecclesiastical supplies. Further information about this program may be found in BuPers Inst. 1730.6.

- **CONUS TRAVEL CUT**—Alnav 38 bans all shore to shore (inside CONUS) rotation for the remainder of the fiscal year.

There are exceptions. Your transfer will become effective if the move is directly related to Fleet readiness; if your orders were issued before the Alnav was issued; if training or the STAR program is involved; or if the move is humanitarian or at no cost to the government.

Also unaffected is the regular Seavey-Shorvey rotation program.

Most of those affected by the new order will be officers finishing up a tour at an installation and scheduled for transfer to another activity within the United States.

Shortage of travel funds was the reason behind the directive.

QUIZ AWEIGH

Flag customs, the 19th Century Navy, and rating groups are the subjects of this month's quiz.

1. The Navy's general (or general service) ratings number more than 60—divided into 12 rating groups of various size. Four of the groups are formed of just one rating: Group III—Electronics Technician; Group X—Medical; Group XI—Dental; Group XII—Steward. Group IV (Precision Instrument) has just two ratings, while there are but three ratings in Group VI (Miscellaneous). What are these five ratings in Groups IV and VI.



2. The 19th Century was a history-packed one; and the U.S. Navy wrote some colorful pages in that century's history. Shown below are some years and some events of that century. See if you can pair them off.

1802 — (a) Commodore Perry secures trade agreement with Japan.

1838 — (b) Navy squadron to "Med" in war against Tripoli.

1847 — (c) Landing party was bushwhacked in Samoa.

1854 — (d) Amphibious landing at Vera Cruz, Mexico.

1899 — (e) Navy's explorations (under Wilkes) begin in Pacific/Antarctic ocean areas.



3. Full dressed ships usually display the national ensign at the flagstaff and at each masthead. The chief feature, though, is the "rainbow of signal flags" running from the foot of the jackstaff to the masthead and then to the foot of the flagstaff. What are the two U.S. national anniversaries on which commissioned ships not underway regularly full dress ship? Page 55 has the answers if you don't.

THE BULLETIN BOARD

Survivor's Annuity Protects Your Family After You Retire

IF YOU HAVE YOUR Emergency Data Form filled out properly your wife is assured an income in the event of your death while on active duty. This costs you nothing. If you want this same assurance *after you retire*, however, you should take advantage of the Uniformed Services Contingency Option Act of 1953.

This protection to your family costs you nothing now and only a small part of your retirement pay after you hang up your hat.

The annuity plan provides a set income for dependents of the Navyman who dies after retirement, provided he has signed up for the program. The amount of the monthly check depends on the amount specified (or "invested") by the Navyman, and it will continue until his wife dies or remarries or until his children reach the age of 18 or marry.

Here's how the plan works. You will automatically be notified by your CO and furnish a copy of NavPers Form 591 some time after you complete 17 years' service for pay purposes. On this form you must state the option you desire, or state that you do not wish to participate in the plan. In either case, you will be told how to go about it. If you want to participate in the program, you must complete this form before you finish 18 years' service for pay purposes.

You should consider this plan even though you have no dependents at the present time. Executing an option will do you no harm and would protect your dependents if you should acquire one or more while still on active duty. Deductions are not made until you actually retire (or start drawing retainer pay), and even then, **ONLY** if you have dependents.

If, on the other hand, you do **NOT** take one of the options, and after you complete 18 years' service, do acquire dependents, you will be ineligible to participate in the program. The act contains provisions which allow you to modify or revoke your option while on active duty.

All-Navy Cartoon Contest
C. J. Ortega, DMISN, USN



"You should have seen him when he read
'It Came from Mars!'"

You may select one or more of four basic options. Under the act, your dependents can receive a monthly check of one-eighth, one-fourth, or one-half of your reduced retired pay (retirement check after your share of the annuity plan is deducted). Here are the basic options:

1. **Annuity for your widow**—Payable to, or in behalf of, your widow, until her death or remarriage.

2. **Annuity for a child or children**—Payable to, or in behalf of, surviving child or children, as long as there

All-Navy Cartoon Contest
W. R. Maul, CT1, USN



"Alright, we'll compromise. You'll get your way and I'll get to keep my big mouth shut!"

is at least one surviving child unmarried and under 18 years of age. Where there is a child unmarried and over 18 years who is incapable of self-support because of mental or physical defects, the annuity would end upon marriage of such a child, or upon his death or recovery.

3. **Annuity for both**—Payable to, or in behalf of, your wife and children. Ends upon death or remarriage of your wife, or if later, when your children are married or turn 18 years old. If there is a mentally defective or physically incapacitated child unmarried and over 18, the annuity would end upon his marriage, recovery or death.

4. **Option in case you outlive your beneficiaries**—This may include the terms of either Options 1, 2, or 3 (or the combination of Option 1 and 2) with the added provision that no further reduction will be made in your pay should your beneficiary (or beneficiaries) die before you.

Another choice is also provided. You may elect a combination of the above options which will provide benefits to your widow only, and one providing benefits to your children only (option one combined with option two), if the total amount of the benefits doesn't exceed one-half of your own reduced retired pay.

Here are two examples of how the option plan can work:

- Suppose a 48-year-old commander has over 26 years' service for pay purposes and his wife is 43 years old. He has no disability and his youngest child is 10 years old. His gross retainer pay is \$503.75 a month. He selects Option 3 and 4, and wants his family to get one-half of his reduced retainer pay. Reduction of the commander's regular retainer pay would be \$61.05, which guarantees his wife or surviving child \$221.35 a month in case of the commander's death. With this added protection for his family, the commander would still receive \$442.70 a month retainer pay.

- The same opportunity is available to the retiring enlisted man.

Let's take a non-disabled CPO for example. With over 22 years' service for pay purposes, this chief is 40 years old and his wife is 37. They have an eight-year-old child. He selects options 3 and 4, with one-half of his reduced retainer pay going to the eligible survivor. His retainer pay is reduced by \$16.38—this leaves him \$176.12 a month—and it guarantees the eligible survivor \$88.06 a month.

Since the life expectancy of a disabled man is usually less, he must contribute more per month to guarantee his survivors the above amounts.

Although the general rule for the annuity plan says you must complete your option form after completing 17 years, but *before* you complete 18 years' service for pay purposes, there are two administrative exceptions.

If you have less than 18 years' service for basic pay purposes, and are placed on the temporary disability retired list, you must submit an election within 30 days after you select the method of computation of retired pay, or receive your official notice that you are being retired.

Also, if you are in a "missing" or "missing-in-action" status when the 18th year deadline passes, you have six months in which to execute an option after you return to U.S. Navy jurisdiction.

After you select the options under the annuity plan you may change your options or revoke the plan altogether at any time before you retire. But, the modification or revocation will not be effective if you retire with pay within five years after you make the modification or revocation. If you have a change of dependents before you retire, you may make a name change without its being considered a modification. Once you are retired, however, no further changes may be made in your options or your dependents, and you will not be allowed to drop the program. Even before you retire if you revoke the plan it is lost to you. You can never again be covered by the Contingency Option Act. Any new dependents (if you remarry, or additional children are born) you acquire after you retire cannot be covered by this act.

There is also one exception to the rule which says once you make a

modification or revocation, you must serve five years before that change or modification may become effective. If you would have been expected to serve five years after a modification or revocation was made, but are released because of the Navy Hump Law, Public Law 86-155, the change will be made regardless of time served.

The annuity plan, brought into effect in 1953, is non-profit, and in the average case the total amount collected by your survivors will be greater than the amount you alone would have received if you had not elected to participate. Yet, the total cost to the government, worked on an "actuarial basis" is approximately the same.

More details about the contingency Option Act are listed in BuPers Inst. 1750.1C.

What About the Other Survivor Benefits

Before you accept or reject the Contingency Option Act of 1953, look over these survivor benefits. As

you will see, most of these benefits end when you leave active duty. The Contingency Option Act, however, offers protection that can offset some of these losses.

• **Death gratuity**—This provides a lump-sum payment for the widow, children, parents, brothers or sisters of military personnel who die while on active duty, active duty for training, inactive duty training, or within 120 days after discharge or separation if death results from service-connected causes as determined by the Veterans' Administration. When computing this payment, figure six times the monthly rate of all items of pay, but not allowances. The minimum payment will be \$800 and the maximum \$3000.

• **Dependency and Indemnity Compensation for Widow**—This Dependency and Indemnity compensation is paid by the Veterans' Administration for death in line of duty, on active duty, active duty for training, inactive duty training, or later if as a result of a service-connected disability. Under this plan, the widow may

WHAT'S IN A NAME

Antarctic Flight Desk

In this age of jet flight you can step up to a counter in practically any airport and check yourself and your baggage through for almost any destination.

If you're headed for the bottom of the world, however, there's only one spot you can do it from—the Antarctic Flights service counter in the Christchurch, N.Z., International Airport.

An element of Task Force 43 (Operation Deep Freeze) and operating under the supervision of the OinC of Naval Advance Headquarters, Christchurch, the service counter is staffed both by Navymen and by airport specialists from the U.S. Air Force's 1710th Aerial Port Squadron.

Intensive advance planning for each incoming flight, and close cooperation with New Zealand authorities make this unified crew so efficient they can process passengers with bag and baggage in a fraction of the usual time. Such top-drawer red tape slicing enables the service counter to funnel more than 4000 men, and tons of baggage and equipment into and out of Antarctica each year.

Antarctic Flights counter stands cheek-by-jowl with one serving Tasmania and

Australia. The two work in complete harmony, and try to arrange their schedules so that their arrivals and departures don't coincide.

There can be an occasional mix-up, though. More than one Australia-bound traveler has turned pale and fled the scene in more than a little disorder upon discovery that he was in danger of being cleared for a flight south—way south.



THE BULLETIN BOARD

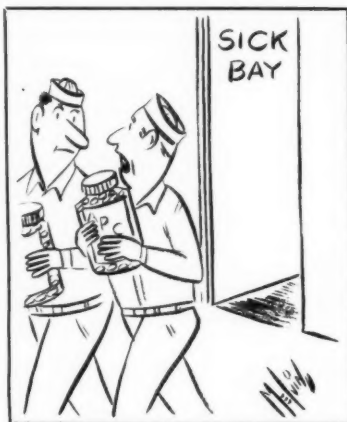
receive a monthly check of \$112, plus 12 per cent of the basic pay the service member was receiving at the time of his death. This check will continue for the balance of the widow's life or until she remarries. This sum is payable even though the widow is employed or has income from another source. (If deceased serviceman has a widow and children, income for the children will come from Social Security, which is discussed in a later paragraph.)

(1) For children—If there is no widow, or none eligible because of remarriage, the VA will make monthly payments to the children, until age 18, at the following rates: one child, \$70 a month; two children, \$100 a month; three children, \$130 per month; plus \$25 a month for each additional child. Payments to children will be made in equal shares. If an orphaned child is attending school at an approved educational institution when he reaches age 18, the monthly check will not only continue until he is 21, but will be increased by \$35 a month. Children are eligible for additional income from Social Security.

(2) For parents—Compensation for parents is based on their current annual income. It ranges, for example, from \$75 to \$15 per month for income of \$750 to \$1750 annually for a single parent and from \$100 to \$20 a month in relation to annual income of \$1000 to \$2400 for both parents.

• **Social Security Payments**—Since 1 Jan 1957, all active duty Navy-men have been covered under the Social Security Program. The amount of money you may receive when 65 years of age or your survivors may receive should you die on active duty depends on your average monthly wage. Once you leave active duty you may or may

All-Navy Cartoon Contest
J. F. Melvin, HM1, USN



"I don't believe that he's generous. I think he's just getting rid of his old stock."

not be covered by Social Security depending on the civilian job you get, and how long you have already paid into the program. BuPers Inst. 1741.10A explains the program, and a separate article about Social Security will be published in a future issue of ALL HANDS. In the meantime, here are the benefits for which you are eligible as an active duty Navyman.

Social Security provides a monthly income for a widow with children or for children alone, or for a widow at age 62, or 65 for dependent parents, or will provide income for the service member when he reaches age 65. This is in addition to military retired pay.

The Social Security benefits to a widow with a child stop when the child is 18 years old. If the child becomes incapable of self-support before turning 18, the VA will continue the check and pay an additional sum of \$70 a month as long as

the child is incapable of self support.

Social Security benefits are based on the average wage of the service member. Earnings from Social Security-covered civilian employment are also included in the average wage figure.

The table on this page gives examples of Social Security benefits which are payable to the serviceman at age 65 or to his survivors in the event of his death:

• Funeral expenses, active duty—

In addition to expenses of preparation, encasement, and transportation of the remains, which are paid by the Navy, further expenses of funeral and burial not to exceed \$200 may be paid when interment is made in a private cemetery. If the remains are consigned to a funeral director before interment in a national cemetery, an amount not to exceed \$125, or where remains are consigned directly to a national cemetery, an amount not to exceed \$75, may be allowed for services not duplicating those furnished by the Government.

• Funeral expenses after retirement or release from active duty—

A sum not to exceed \$250 may be paid as reimbursement for burial expenses. The veteran must have had wartime service or service during the Korean conflict. If the veteran has had only peacetime service, he must have been receiving disability compensation at the time of death or must have been discharged or retired for disability incurred in line of duty. The survivor must apply for this benefit from the nearest Veterans' Administration Office.

• Headstone or memorial marker—

A headstone or grave marker for the unmarked grave of a member of the Navy who dies on active duty, or for any veteran whose last active service ended honorably, is furnished free by the Department of the Army. A headstone or grave marker may also be obtained to commemorate death in service of a member of the Navy whose remains have not been recovered or identified, or were buried at sea. Application should be made to the Office of the Quartermaster General, Department of the Army, Washington 25, D.C.

In short, survivor benefits help protect your family while you are on active duty; the Contingency Option Act continues beyond that point.

OLD-AGE BENEFITS or SURVIVOR BENEFITS

Average monthly earnings	Workers' monthly benefit	Worker and wife	Widow (Age 62), child, or parent	Widow and child	Widow and two children
\$110	\$ 65.00	\$ 97.50	\$48.80	\$ 97.60	\$ 97.60
150	73.00	109.50	54.80	109.60	120.00
210	86.00	129.00	64.50	129.00	168.90
250	95.00	142.50	71.30	142.60	190.10
300	105.00	157.50	78.80	157.60	210.20
350	116.00	174.00	87.00	174.00	232.00
400	127.00	190.50	95.30	190.60	254.00

Here Are the Straight Facts on the Story of COLA and HOLA

ONE OF THE LEAST UNDERSTOOD, or most misunderstood, subjects related to military pay is station allowances.

Briefly, these are payments made to Navymen (as well as other service personnel) on duty outside the U.S. to defray the differences between the average costs at a specific overseas station and the average stateside costs—when the overseas costs are greater. If the overseas costs are less than the stateside costs, there are no station allowances.

In general station allowances are payable when (1) quarters are not available to an unaccompanied Navyman or (2) his family is with him and no quarters are available for them or (3) messing facilities are not available to him or his family if they are with him or (4) a man not accompanied by his family is authorized to mess separately.

Two types of station allowances are *Cost-of-Living Allowance (COLA)* and *Housing Allowance (HOLA)*.

Cost-of-Living Allowance — COLA represents the relative difference between all living costs (less housing) for naval personnel in the United States and similar living costs at the overseas location. The difference is shown in the form of an index for the overseas location. The index for that location, assuming that a COLA is authorized, will be anywhere from 102 to 198. The base index of 100 represents the United States as a whole.

The following steps are taken to arrive at the station's index: At the overseas location the prices of goods and services are determined at commissaries, ships stores ashore, post exchanges and Navy exchanges, as well as at commercial outlets (grocery stores, clothing stores, mail order houses and public markets). The overseas location's prices are compared with prices at stateside exchanges, commissaries and commercial outlets. Much of the stateside information is provided by the Bureau of Labor Statistics.

In line with this comparison, estimates are made of the relative importance of the various sources of supply. Using clothing as just one example, what per cent is bought locally at government outlets? What

per cent is bought locally at commercial outlets? What per cent is ordered from the States?

Expenditure weights form another factor that enters into the index. Here are weighed the relative importance in the family budget of food, clothing, recreation, medical care, transportation and other factors. At the overseas location, for instance, there may be no government medical facilities available. On the other hand, free recreational facilities may be present in large measure.

The differences in volume of purchases brought about by the climatic, economic, cultural and other aspects peculiar to a particular overseas location are also considered. Individuals living in Alaska or Newfoundland, for example, would spend—on the whole—far more on clothing, on a year-around basis, than those in tropical climates. For another example, automobile owners living in a relatively underdeveloped area would find the wear and tear on their automobiles and tires much

greater than if they were in a location with well paved roads.

Housing Allowance — HOLA is intended to compensate the Navyman for the greater costs of rent, utilities, and "moving-in costs." The housing costs at the overseas location are compared with the standard basic allowance for quarters (\$51.30, \$77.10 or \$96.90). A little figuring shows that this often makes for a rather favorable HOLA, because the monthly rent paid stateside is, in most cases, greater than the BAQ.

"Moving-in" or initial occupancy costs are factors figured into HOLA. Such costs are those brought about in bringing a residence up to American standards. Improvements in the plumbing, electrical system and gas and heating installations and painting, papering, plastering, screening and shelving are included.

The initial costs are divided by the number of months of the average overseas tour at the location. This amount is combined with the average monthly rental costs and utilities costs by pay grade to obtain

STATION COST OF LIVING ALLOWANCES (DAILY)
LOCATIONS WHERE THE COST-OF-LIVING INDEX IS 102

GRADE	MEMBERS WITHOUT DEPENDENTS	MEMBERS WITH DEPENDENTS				
		1 Dependent	2 Dependents	3 Dependents	4 Dependents	5 or more Dependents
O-10	\$0.35	\$0.40	\$0.45	\$0.45	\$0.50	\$0.50
O-9						
O-8						
O-7						
O-6						
O-5						
O-4						
O-3						
O-2	.20	.20	.25	.25	.25	.30
O-1	.15	.20	.20	.20	.20	.20
W-4	.25	.30	.30	.30	.35	.35
W-3	.20	.25	.25	.30	.30	.30
W-2	.20	.25	.25	.25	.30	.30
W-1	.20	.20	.25	.25	.25	.25
E-9	.20	.25	.25	.30	.30	.35
E-8	.20	.25	.25	.25	.30	.35
E-7	.15	.20	.25	.25	.30	.30
E-6	.15	.20	.20	.25	.25	.25
E-5	.15	.15	.20	.20	.20	.25
E-4	.10	.15	.15	.15	.20	.20
E-3	.10					
E-2	.10					
E-1	.10					

THE BULLETIN BOARD

an average over-all monthly housing cost. When the average BAQ for each pay grade is subtracted from the over-all housing costs, the difference is the housing allowance. It is not a monthly figure, however.

Instead, it is divided by 30 and expressed as a per diem.

The present system of COLA and HOLA replaced, on 1 Feb 1959, the older system of station allowance for subsistence and station allowance

for quarters. In the newer system there is much more variety in the amount of payments. COLA Index 114 (which accompanies this article) shows 110 different payment entries. Under the older system there were but four payment entries: officer with dependents, officer without dependents, enlisted with dependents, enlisted without dependents.

A similar four-part breakdown also applied to the older quarters allowance. Under the present system—though still based on “with dependents” and “without dependents”—there is now a tabulation for each pay grade.

Here's the background on station allowances. Briefly stated, station allowances are carefully computed amounts paid to overseas personnel to equalize the costs of differences between all elements of stateside living and overseas living.

Station allowances are not paid to compensate for duty at a remote location, or a location with few off-station facilities, or a station subject to unpleasant weather most of the year. Nor are they paid for representing the United States in a foreign area.

Allowances for each location are reviewed semi-annually and are subject to change at any time.

Station allowances are established by the Per Diem Travel and Transportation Committee. Better known as the Per Diem Committee, it was created in 1950 to carry out certain provisions of the Career Compensation Act of 1949.

Operating as an independent agency under the broad policy control of the Secretary of Defense, its members are of the level of Under Secretary or Assistant Secretary of the Army, Navy and Air Force. Equivalent officials of the Treasury (for the Coast Guard), Commerce (for the Coast and Geodetic Survey) and Health, Education and Welfare (for the Public Health Service) take collateral action on all committee determinations. *Joint Travel Regulations* is the committee's publication.

Most of the day-to-day work is carried out by an advisory panel comprising an officer of each of the seven uniformed services and a civilian staff. Both the group and staff are headed up by an executive officer in pay grade O-6. This officer

LOCATIONS WHERE THE COST-OF-LIVING INDEX IS 150

GRADE	MEMBERS WITHOUT DEPENDENTS	MEMBERS WITH DEPENDENTS				
		1 Dependent	2 Dependents	3 Dependents	4 Dependents	5 or more Dependents
O-10						
O-9	\$8.40	\$10.50	\$11.00	\$11.55	\$12.10	\$12.90
O-8						
O-7	8.15	10.10	10.60	11.15	11.70	12.25
O-6	7.35	8.95	9.40	9.90	10.40	10.95
O-5	6.60	7.95	8.40	8.85	9.35	9.85
O-4	6.25	7.50	7.90	8.35	8.85	9.35
O-3	5.65	6.75	7.15	7.60	8.05	8.50
O-2	4.60	5.40	5.80	6.20	6.60	7.00
O-1	3.65	4.35	4.65	5.00	5.30	5.55
W-4	5.90	7.00	7.40	7.85	8.30	8.80
W-3	5.35	6.30	6.70	7.10	7.55	8.00
W-2	4.75	5.65	6.00	6.40	6.80	7.25
W-1	4.50	5.30	5.80	6.05	6.45	6.85
E-9	5.00	6.10	6.65	7.25	7.95	8.65
E-8	4.65	5.70	6.20	6.80	7.45	8.15
E-7	4.30	5.25	5.80	6.35	6.95	7.60
E-6	3.90	4.70	5.20	5.75	6.30	6.80
E-5	3.45	4.20	4.65	5.10	5.55	5.95
E-4	2.90	3.55	4.00	4.30	4.65	5.00
E-3	2.45					
E-2	2.05					
E-1	2.00					

LOCATIONS WHERE THE COST-OF-LIVING INDEX IS 198

O-10						
O-9	\$16.45	\$20.55	\$21.60	\$22.65	\$23.75	\$25.30
O-8						
O-7	15.95	19.75	20.75	21.80	22.90	24.00
O-6	14.40	17.50	18.45	19.40	20.40	21.50
O-5	12.95	15.55	16.40	17.35	18.30	19.30
O-4	12.25	14.65	15.50	16.40	17.30	18.30
O-3	11.10	13.20	14.00	14.85	15.75	16.65
O-2	9.00	10.60	11.35	12.10	12.90	13.75
O-1	7.20	8.50	9.15	9.80	10.40	10.90
W-4	11.50	13.70	14.50	15.40	16.25	17.20
W-3	10.45	12.40	13.15	13.95	14.80	15.70
W-2	9.35	11.05	11.75	12.55	13.35	14.20
W-1	8.80	10.40	11.35	11.85	12.60	13.45
E-9	9.75	11.95	13.05	14.25	15.55	16.95
E-8	9.10	11.15	12.20	13.35	14.60	15.95
E-7	8.45	10.30	11.30	12.40	13.60	14.90
E-6	7.60	9.25	10.20	11.20	12.35	13.35
E-5	6.70	8.20	9.05	10.05	10.85	11.70
E-4	5.70	6.95	7.80	8.40	9.05	9.80
E-3	4.80					
E-2	4.05					
E-1	3.95					

is presently a Navy captain, but the position is rotated among the Army, Navy and Air Force.

A good part of the staff's work deals with reducing to tables a mass of rough statistical material in the form of semi-annual reports from 84 countries. The Committee members not only deal with reports coming in; they or their representatives also go out and get a first-hand look at overseas locations, and make changes accordingly.

In one 20-month period committee representatives visited locations in South America, Alaska, France, Italy, Greece, the United Kingdom, Scandinavia, the Low Countries, the Middle East, Ethiopia and the Southwest Pacific as far as Thailand.

To illustrate what we mean, on the next few pages are HOLA figures for a group of representative locations. Owing to space limitations only a few locations are listed. COLA indexes for the representative locations are also given. There are 48 separate indexes but only three are listed in their entirety, again because of space limitations. These figures are from Appendix B and C of *Joint Travel Regulations*—and are subject to change at any time.

Representative Samples

STATION AND PER DIEM ALLOWANCES TAIPEI, TAIWAN			
Cost of Living Index			104
Travel Per Diem Allowance			\$14.00
Housing Allowance (Daily):			
Grade	Without Dependents	With Dependents	
O-5 thru O-10	\$0.00	\$1.55	
O-4	0.00	1.65	
O-1 thru O-3	0.00	1.90	
W-4	0.00	1.65	
W-1 thru W-3	0.00	1.90	
E-7 thru E-9	.90	1.75	
E-6	.70	1.45	
E-5	.55	1.45	
E-4	.45	1.45	
E-1 thru E-3	.45		

BAHAMA ISLANDS, WEST INDIES

Cost of Living Index			104
Travel Per Diem Allowance			\$15.00
Housing Allowance (Daily):			
Grade	Without Dependents	With Dependents	
O-1 thru 1-10	\$0.65	\$1.55	
W-1 thru W-4	.65	1.55	
E-4 thru E-9	.55	1.75	
E-1 thru E-3	.55		

KODIAK, ALASKA

Cost of Living Index			114
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Grains of Salt—



Travel Per Diem Allowance			
Gov't Quarters Available		\$11.00	
Gov't Quarters Not Available		17.00	
Housing Allowance (Daily):			
Grade	Without Dependents	With Dependents	
O-2 thru O-10	\$2.10	\$3.85	
O-1	2.10	4.15	
W-1 thru W-4	2.10	4.15	
E-4 thru E-9	1.05	4.15	
E-1 thru E-3	1.05		

LONDON, UNITED KINGDOM

Cost of Living Index			102
Travel Per Diem Allowance			\$15.00
Housing Allowance (Daily):			
Grade	Without Dependents	With Dependents	
O-6 thru O-10	\$2.30	\$3.85	
O-5	2.10	3.50	
O-4	1.75	2.90	
O-3	1.65	2.75	
O-2	1.45	2.40	
O-1	1.35	2.25	
W-4	1.75	2.90	

All-Navy Cartoon Contest
G. W. Everett, IC3, USN



"Man, just think of it . . . two more days and I'll be a civilian!"

W-3	1.65	2.75
W-2	1.45	2.40
W-1	1.35	2.25
E-7 thru E-9	1.15	1.90
E-6	1.00	1.65
E-5	.95	1.55
E-4	.85	1.45
E-1 thru E-3	.85	

NAPLES, ITALY

Cost of Living Index		106
Travel Per Diem Allowance		\$12.00
Housing Allowance (Daily):		

Grade	Without Dependents	With Dependents
O-8 thru O-10	\$1.75	\$2.90
O-7	1.55	2.60
O-6	1.45	2.40
O-4, O-5	1.30	2.10
O-1 thru O-3	1.15	1.90
W-4	1.30	2.10
W-1 thru W-3	1.15	1.90
E-7 thru E-9	.70	1.15
E-6	.65	1.05
E-5	.55	.95
E-4	.55	.90
E-1 thru E-3	.55	

Medical Service Corps Commissions Open to HM and DT Personnel

If you're a hospital corpsman or dental technician first class or senior, if you've been E-6 or higher for at least one year, and can meet certain educational and other standards, you may be eligible to apply for a commission as an Ensign in the Medical Service Corps, 2305 (Supply and Administration).

The program is open to both men and women between the ages of 21 and 31-and-one-half. Maximum age can be adjusted on a month-for-month basis for earlier active military service performed, up to 36 months.

In addition to meeting the basic eligibility requirements for all OCS candidates, you must score 40 or better on the OQT or WOQT Form 7W, or have a GCT score of 63 or more. The educational standard is at the two-year college level—a requirement which may be met by having completed 60 semester hours of college work at an accredited college or university, or by having satisfactorily completed the USAFI 2CX test before 1 Jan 1954. However, even if you do not meet all the educational standards, your CO is authorized to forward your application if you are considered outstandingly qualified in all other respects.

Policy Revised on Separation Of Officers After Making Permanent Change of Station

Policies on the resignation of officers have been revised to save the expense of transportation that used to be lost when an officer left the service shortly after completing a permanent change of station.

From now on, unless a genuine hardship exists, or the officer concerned gives official notice of his intent to resign before he executes his transfer orders, he will ordinarily have to complete one year of service or a normal overseas tour at his last active duty station. The new requirement is set forth in SecNav Inst. 1920.3B, which applies to all officers of the Regular Navy and Naval Reserve except officers of the Medical and Dental Corps.

Officers of the U.S. Navy serve at the pleasure of the President without any terminal dates set for their commissions. To maintain a sound officer corps, the Secretary of the Navy, under his authority to act for the President, establishes the criteria he considers necessary to cover voluntary terminations of officer status.

Under the latest SecNav Instruc-

All-Navy Cartoon Contest
G. W. Everett, IC3, USN



"It may please you to know son, that I am referred to as Chief... Not 'Daddy-O!'"

tion on the subject, male officers of the Regular Navy who submit their resignations may normally expect favorable action on their requests if they have completed the four years' active commissioned service required of officers who hold permanent commissions, plus any additional service requirements they have incurred.

Periods of advanced training or graduate instruction are considered

part of the four years of "basic required service." Obligations incurred as a result of that training or instruction, except in the case of flight training, are figured as additional service.

The additional service for flight training will follow the completion of that training in the case of permanent USN officers (including those who become permanent after they have begun flight training). The current additional service obligations for flight training are: two years for officers who completed their basic flight training before 1 Jan 1958; and three-and-one-half years for officers who completed their basic on or after that date. In either case, the total service must meet the minimum service requirement of four years.

Besides meeting the basic and additional service requirements, an applicant will normally have to fulfill a total service obligation for his resignation to be approved. If he was commissioned USN on or after 9 Aug 1955, and his total active and inactive commissioned service is less than six years, favorable action on his resignation will hinge on his acceptance of a commission in the Naval Reserve. If he was commissioned before 9 Aug 1955 the six-year figure is upped to eight.

Male Naval Reserve officers can normally expect favorable action on their resignations if they have completed their obligated active duty and their six- or eight-year totals of active and inactive commissioned service (depending again on the 9 Aug 55 cutoff date).

In the case of women officers, either Regular or Reserve, resignations will normally be accepted now upon the completion of two or more years of active commissioned service, plus any additional service obligations incurred in connection with specialized training. Married USN women officers will not normally have to accept Reserve commissions to have resignations approved.

Temporary and warrant officers, who wish to revert to their permanent enlisted grades to continue on active duty as enlisted men or to be discharged upon the expiration of their enlistments, will normally receive favorable consideration.

Official word on voluntary separation policies may be found in SecNav Inst. 1920.3B.

Sub Acts as Decompression Chamber, Saves Frogman

Marine Corps frogman CPL D. F. Merwing is alive today because a Navy submarine skipper is a "man who thinks for himself."

CPL Merwing, a member of a Camp Pendleton underwater reconnaissance team, became a victim of the dreaded bends recently after a series of deep dives off the high-speed transport *uss Cook* (APD 130) off the California coast.

During the dives, air pressure in the young Marine's body built up, and nitrogen dissolved in large amounts into his body tissue. As he rose the last time, and air pressure dropped, the nitrogen was freed and bubbled out through his body. Those bubbles clustered in nerve tissues, causing paralysis and excruciating pain in the arms, legs and stomach.

When a man's in that condition, there's no time to waste—he needs to be "decompressed," and fast. Unfortunately, in this case the nearest decompression chamber

was at San Francisco's Hunters Point Naval Shipyard, more than 200 miles away.

It was here that LCDR C. H. Lowry, CO of the nearby submarine *Redfish* (AGSS 395) stepped in with a solution. Ordering the stricken man placed in the submarine's pressurized escape hatch, LCDR Lowry hurriedly gunned *Redfish* below to a depth of 125 feet. This built up pressure inside the escape hatch to approximately the same level CPL Merwing had encountered at the deepest point of his dives. Then *Redfish* lit out for San Francisco, and during the 16-hour trip LCDR Lowry brought her toward the surface in gentle stages, gradually decreasing pressure inside the hatch in the process.

Submariner Lowry's quick thinking paid off—by the time CPL Merwing was delivered to the Hunters Point decompression chamber he was out of danger and was on the road to recovery.

Put In Your Request Early for Fleet Reserve To Insure Transfer at Time Desired

If you want to go into the Fleet Reserve within the next year, you had better put in your papers now. The Chief of Naval Personnel needs at least six months to process your papers and get a relief for you under Seavey-Shorvey.

Although the Bureau wants men to transfer to the Fleet Reserve on the date they choose, it has been necessary in the past to defer a few transfers because they were not submitted early enough. BuPers does not, however, want papers submitted more than one year early.

You have the best chance to transfer on the date you choose, advises the Chief of Naval Personnel, if you submit your application one year in advance of the desired transfer date. A copy of this request should also go to the cognizant distribution commander.

If your application is received by the Bureau one year early, it will be authorized unless you:

- Have received permanent change of station orders.

- Request transfer to the Fleet Reserve on a date after you are scheduled to transfer under Seavey/Shorvey.

- Have agreed to remain on active duty for some special program.

If your application for transfer to the Fleet Reserve is received by the Bureau less than one year in advance, or if you are included in one of the exceptions listed above, the Chief of Naval Personnel will take the following action:

- If you have received permanent change of station orders at the time of application, you will be transferred to the Fleet Reserve after one year on board new duty station.

- If you request transfer to the Fleet Reserve on a date after your established rotation tour date, you will be transferred to the Fleet Reserve after you complete your present tour of duty and after you have served one year on board your new duty station.

- If you have executed an agreement to remain on active duty, you will be released after your active duty obligation is served.

- If you have served less than one year on board present duty station,

ANSWERS TO QUIZ AWEIGH

1. Instrumentman and Optician are the two Group IV ratings. Lithographer, Musician and Draftsman are the three Group VI ratings.

2. a. — 1854 d. — 1847
b. — 1802 e. — 1838
c. — 1899

3. Washington's Birthday (22 February) and Independence Day (4 July). (At 1200 each saluting ship shall fire a national salute of 21 guns.)

Quiz Aweigh questions are on page 47.

you will be transferred to the Fleet Reserve after one year on board has been served.

- If you submit your application less than six months before you wish to go into the Fleet Reserve, the Bureau may postpone your transfer up to six months to give distributors adequate time to select and order a qualified relief.

In some cases when you're in a rate or billet in which a shortage exists, it may be necessary to hold up transfer to the Fleet Reserve until the end of your obligated service. Such deferments, however, will be considered on an individual basis.

Full details are listed in BuPers Inst. 1830.1A.

Watch Out for Those Navy Science Cruisers

If some studious-looking youngster comes up to you and asks how you put science to practical use in your work, don't try to brush him off. It's all part of a Navy program.

That young man may be one of the 200 students selected each year by the Navy through exhibits at science fairs throughout the country. Students whose projects are of par-

ticular interest to the Navy are designated as Navy Science Cruisers. After selection, the students are invited to participate in a short Fleet cruise or visit a shore installation to see how the Navy makes practical use of science. In addition, 10 of them are presented trophies by the Navy at the National Science Fair for their unusual achievements in the field of science.

This program, which was established in 1958, has been adopted throughout the Navy to help interest more students in science. Additional details may be found in SecNav Inst. 5720.19A.

List of New Motion Pictures Scheduled for Distribution To Ships and Overseas Bases

The latest list of 16-mm. feature movies available from the Navy Motion Picture Service, Bldg. 311, Naval Base, Brooklyn 1, N.Y., is published here for the convenience of ships and overseas bases. The title of each picture is followed by the program number.

Those in color are designated by (C) and those in wide-screen processes by (WS). Distribution of these motion pictures to the Fleet began in October.

Head of a Tyrant (1595) (C) (WS): Melodrama; Massimo Girotti, Isabelle Corey.

Crack in the Mirror (1596) (WS): Drama; Orson Welles, Juliette Greco.

S.O.S. Pacific (1597): Drama; Eddie Constantine, Pier Angeli.

The Gallant Hours (1598): Drama; James Cagney, Dennis Weaver.

Wild River (1599) (C) (WS):

All Navy Cartoon Contest

E. L. Bennett, GM2, USN



Drama; Montgomery Clift, Lee Remick.

The Apartment (1960) (WS): Comedy-Drama; Jack Lemmon, Shirley MacLaine.

Twelve Hours to Kill (1961) (WS): Drama; Nico Minardos, Barbara Eden.

Inherit the Wind (1962): Drama; Spencer Tracy, Frederic March.

The Story of Ruth (1963) (C) (WS): Drama; Elana Eden, Stuart Whitman.

Flame Over India (1964) (C) (WS): Melodrama; Kenneth More, Lauren Bacall.

Macumba Love (1965) (C): Melodrama; Walter Reed.

The Enemy General (1966):

Melodrama; Van Johnson, Jean Pierre Aumont.

The Bells Are Ringing (1967) (C) (WS): Musical Comedy; Judy Holliday, Dean Martin.

Battle in Outer Space (1968) (C) (WS): Melodrama; Ryo Ikebe, Kyoko Anzai.

Four Desperate Men (1969): Melodrama; Aldo Ray, Heather Sears.

Portrait in Black (19610) (C): Drama; Lana Turner, Anthony Quinn.

History of Administration of Navy Department in WWII

The book *Administration of the Navy Department in World War II*,

by RADM Julius A. Furer, USN (Ret.), a Naval History Division publication, is now available in libraries and in various offices of the naval establishment.

Besides being a history of Navy Department administration including industrial mobilization, and the application of scientific research to the development of new naval weapons and devices during the war, the book also sketches the background history of Navy Department organization and practices since the beginning of the federal government.

This single volume history provides without extensive research the answers to many questions, or it can serve as a guide to more complete coverage.

LST Loses Bow Anchor But Search Crew Locates Ship That Was Sunk Decades Ago

A Pacific Fleet LST operating in the central Pacific has discovered an as-yet-to-be-identified wrecked ship lying in five fathoms of water. The ship is about 150 to 200 feet in length and is a combination sailing vessel and steamship.

USS *Jerome County* (LST 484) of Landing Ship Squadron One, had been working in support of the Missile Impact Locator System and was moored by both bow and stern anchors in the southwest entrance to Kure (Ocean) Island. When the ship began heaving around to get underway, the bow anchor became lost in five fathoms of coral-and-sand bottom. Then it turned out that the stern anchor was fouled by an obstruction.

A close look showed that a large section of a submerged wreck, extending a considerable distance under the ship, had been broken loose from the bottom by the LST's anchors. After much effort the stern anchor was finally freed and the ship was able to proceed on her mission.

Not wishing to give up his ship's bow anchor to the sea, the ship's CO, LT G. R. Bradford, USN, decided that as soon as the schedule permitted—and providing it could be located—an attempt would be made to recover the bow anchor.

Later, several methods were used in trying to locate the spot, including aerial flights over the area. A marker buoy dropped on the spot had parted its moorings and drifted

away. The search revealed nothing.

Next, the crew borrowed a motor boat with a glass-bottomed section. Then the LST anchored as near to the previous site as navigationally possible. As it developed, the ship did a rather accurate job of it, anchoring (by the stern anchor) within 30 yards of the previous spot.

Into the boat went the ship's CO, the supply officer and a seaman. Peering through the glass bottom, they sighted the bow anchor within five minutes. A minute later they again sighted the submerged wreck. It appeared to have been lying there a long time. As a "sailer/steamer," it would most likely be a ship of the last century.

During the course of the examination several large anchors were spotted. Aboard the LST to assist in the recovery of the bow anchor were frogmen L. J. Savoie, FT1 and E. C. Reynolds, DC1. They went into the water and shackled a wire to the bow anchor and it was promptly hauled. Back into the water they went, and 30 minutes later a heavily encrusted, but still intact, anchor was on deck. It was a "stock-and-shanked" old fashioned type.

There was much speculation about the submerged vessel. What ship was it? How long had she been there? Why had she gone down? Crew member G. G. Newell, DC1, recalled reading an article in ALL HANDS telling about the loss

of USS *Saginaw* at Kure Island in 1870. (Damage Controlman Newell has an excellent memory. There was a lengthy letter about that ship on page 27 of the May 1960 issue.)

After *Jerome County* returned to Midway, efforts were made to determine whether or not the wreck was that of *Saginaw*. However, no one was sure. In an effort to gather leads, wide dissemination was made of the news of the discovery, the exact location, the dimensions of the anchor and a description of the wreck.

Meanwhile, authorities directed that other relics be recovered, as feasible—and that along with the anchor they be sent to the Navy Department's Curator, in Washington, D.C. As a result, several port-hole frames, brass wheels of the type used in gun carriages, a wheel for a hand-cranked bilge pump and several other items were recovered.

A 1912 issue of the book, *Last Voyage of the Saginaw*, was obtained from the Library of Hawaii. The book disclosed that *Saginaw* had gone aground on the east reef of the atoll. The wreck discovered by *Jerome County* was on the southwest side—which ruled out *Saginaw*.

Several ships, such as *Dunnotter Castle*, lost in 1889, have met this fate at Kure Island. Their exact position when lost is not known, however. Perhaps when the experts study the relics they can answer the question.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interest in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details.

Alnavs

No. 34—Announced approval by the President of the report of a selection board which recommended Marine Corps officers on active duty for temporary promotion to the grade of lieutenant colonel.

No. 35—Required suspension from issue and use of certain influenza virus vaccine.

No. 36—Announced approval by the President of the reports of selection boards which recommended naval officers on active duty for promotion to captain, Medical Corps; commander, Medical Corps; captain, Supply Corps; commander, Supply Corps; captain, Chaplain Corps; commander, Chaplain Corps; captain, Civil Engineer Corps; commander, Civil Engineer Corps; captain, Dental Corps; commander, Dental Corps; captain, Medical Service Corps; commander, Medical Service Corps; captain, Nurse Corps; commander, Nurse Corps; and commander (W) line.

No. 37—Announced approval by the Secretary of the Navy of the report of a selection board which recommended Regular Marine Corps warrant officers to the grades of Chief Warrant Officer W4 (permanent); Chief Warrant Officer W4 (temporary); Chief Warrant Officer W3 (permanent); Chief Warrant Officer W3 (temporary) and Chief Warrant Officer W2 (permanent).

No. 38—Announced that, owing to insufficient travel funds, all shore to shore rotation CONUS, will, with certain exceptions, be suspended for the remainder of fiscal year 1961.

Instructions

No. 1120.12E—Outlines the eligibility requirements and processing procedures whereby certain USNR and USN temporary officers in the grade of ensign through lieutenant

commander (temporary) may be considered for appointment as permanently commissioned usn officers.

No. 5321.7—Announces a program whereby enlisted striker billet requirements for certain specified ratings will be identified.

Notices

No. 1430 (28 September)—Announced the selection of personnel for change in rating to Postal Clerk (PC) and provided procedures for the change in rating.

No. 1416 (3 October)—Cancelled

the requirement for letters of qualification from active-duty officers selected for promotion other than officers and warrant officers of the Medical Department.

No. 1910 (6 October)—Authorized the advancement of the separation date of those personnel becoming eligible for separation during the Christmas-New Year holiday period.

No. 1742 (10 October)—Requested that certain statistical data in connection with absentee voting be forwarded to the Chief of Naval Personnel.

HOW DID IT START

Aiguillettes

If you see a Navy officer with fancy gold cord around his shoulder or draped on his lapel, he is a Naval Aide. The officer's fancy gold cords are called aiguillettes (a-gwi-lets) and his job is to serve as an administrative or personal assistant to an admiral or other high official.

You may see two types of aiguillettes—dress or service dress. Dress aiguillettes not only go around the shoulder of an aide, but also are plaited and draped on his lapel. All aides wear identical dress aiguillettes except the Aide to the President of the United States.

Dress aiguillettes for the Aide to the President are plaited cord covered with gold or gilt thread. Dress aiguillettes for other aides have blue silk intertwined with the gold or gilt thread. The Aide to the President or any other Aides at the White House, always wear their aiguillettes on the right shoulder. All other Aides wear theirs on the left shoulder.

Service aiguillettes, which are worn with the service dress uniform, are gold cord loops worn around the shoulder. Here again, the cord is covered with plain gold or gilt thread for the Aide to the President, and by gold thread and silk cloth for other aides. And just like dress aiguillettes, they are worn on the left shoulder of all aides except those at the White House.

An aide to an admiral or officials of higher rank wears four loops of service aiguillette cord around the shoulder; naval attaches and assistant naval attaches wear four loops; aides to a vice admiral, three loops; aides to a rear admiral and officers of lower rank, two loops; and aides to a governor of a state or territory, two loops.

Exactly how aiguillettes originated seems to be uncertain. Some historians believe that the first ones were probably rope with pegs on the end. This rope, which was worn around the shoulder of an aide-de-camp to a knight, was used as a tether for

the knight's horse. Other men believe aiguillettes stem from their use by provost marshalls. It has been said that on occasion they may have served as a hangman's rope.

Today, aiguillettes are a distinctive item of dress for personnel who serve as aides to high officials. Navy Uniform Regulations requires that aiguillettes be worn by Navy officers who perform duties as the Aide to the President of the United States; an Aide at the White House; Aide to the Secretary of Defense; Aide to the Secretary, Under Secretary and Assistant Secretaries of the Navy; Aide to the Deputy or Assistant Secretary of Defense; or as an aide to a flag officer. It further requires that aiguillettes be worn, when so ordered, by naval attaches and assistant naval attaches and aides to top ranking representatives of foreign nations who are visiting the United States. They may also be worn on official occasions by officers appointed as aides on the staff of a governor of a state or territory.

Aiguillettes are worn only when on duty as an aide. For that reason, they are generally purchased by the command to which the aide is attached. When the aide leaves, the aiguillettes stay with the job.



DECORATIONS & CITATIONS

DISTINGUISHED SERVICE MEDAL

"For exceptionally meritorious service to the Government of the United States in a duty of great responsibility..."

★ RABORN, William F., Jr., RADM, USN, for exceptionally meritorious service to the Government of the United States in a duty of great responsibility from 2 Dec 1955 to 20 Jul 1960. In late 1955, RADM Raborn was charged with the task of developing a Fleet Ballistic Missile System. He established the Special Projects Office, Department of the Navy, and directed his attention to the inauguration of definitive management methods which would provide a necessary degree of control but insure that expenditures would be in accord with budgetary considerations as well as the urgency of the program. He established a single yet forceful management system which encompassed all elements of his responsibility implementing a totally new management tool—the Progress Evaluation Reporting Technique. RADM Raborn's dynamic leadership and initiative were the motivating factors in the successful accomplishments of this important task when, on 20 Jul 1960, *uss George Washington*, SSB(N) 598, proved the operational readiness of the Fleet Ballistic Missile System by launching two *Polaris* missiles from the ocean depths.

LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service in the Government of the United States..."

★ SUTHERLAND, William R., LTJG, USN, for exceptionally meritorious conduct in the performance of outstanding services from 1 Oct 1959 to 1 Feb 1960 while serving on board Air Antisubmarine Squadron Twenty-seven. Upon becoming aware of the problems involved in training pilots and aircrewmembers in a certain antisubmarine-warfare technique, LTJG Sutherland, as Assistant Aviation Electronics Officer, designed and built a training device which materially reduces the time required to train pilots and aircrewmembers in that technique, and which enables them to maintain their proficiency, once

acquired. By his outstanding technical ability, initiative, and resourcefulness, he has greatly aided in enhancing the readiness of fleet-air antisubmarine-warfare units.

★ WARD, Chester C., RADM, USN, for exceptionally meritorious conduct in the performance of outstanding services to the Government of the United States as Judge Advocate General of the Navy from 3 Aug 1956 to 1 Aug 1960. He has been widely acclaimed for his realistically expressed convictions concerning the legal posture of the cold war and the communist conspiracy. RADM Ward has taken a leading role and performed outstanding services in recent efforts by the United States to preserve the principle of "freedom of the seas" by promoting treaty recognition of the concept of narrow limits of territorial waters. He has successfully established programs in the Navy promoting speed, simplicity and economy in the administration of justice without sacrificing the quality thereof.

Gold Star in Lieu of Second Award

★ HARRIS, Dale, RADM, USN, for exceptionally meritorious conduct in the performance of outstanding service as Deputy Commander Naval Striking and Support Forces, Southern Europe, from July 1957 to May 1959; Commandant, Eleventh Naval District (March-July 1960); and as Commander of several major naval activities in the San Diego, Calif. area, from July 1959 to August 1960. Through his efforts in the Southern European area, he created a better allied understanding of United States seapower on the southern flank of Europe. As Commander, U.S. Naval Air Bases, in the Eleventh and Twelfth Naval Districts, he was instrumental in planning for important naval organizational changes.

Gold Star in Lieu of 4th Award

★ BRUTON, Henry C., RADM, USN, for exceptionally meritorious conduct in the performance of outstanding services as Director, Communications-Electronics Division, Headquarters, United States European Command, from 30 Jun 1958 to 31 Jul 1960. RADM Bruton has made a significant contribution to the successful accomplishment of the many joint communications-electronics tasks in the European Command area of responsibility. Under his direction, great progress has been made in the fields of electronic warfare, air-navigation aids, and emergency communi-

cations. He provided invaluable support to the efforts of the Supreme Allied Commander, Europe, to bring about integrated air defense of NATO Europe and other NATO communications-electronics projects.

NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy..."

★ CROSS, Curtis K., FT1, USN, for heroic conduct on 20 Apr 1960 while serving on board *uss Topeka* (CLG 8). As Petty Officer in Charge of a detail of ship's force personnel assigned to lower the boresight and collimation tower of the *Topeka's* missile guidance radars, Cross was in the container with three shipmates when the guy wires to the tower were released and the tower fell. In order to allow his men to escape certain injury or possible death, he chose to remain in the container in an effort to reduce the rate of the fall of the tower with his back. Cross sustained severe injuries while carrying out this daring act.

★ LAMBERT, Richard M., SN, USN, for heroic conduct during a fire in a home in Oxnard, Calif., shortly after midnight on the morning of 19 Mar 1960. Passing by in his car when he observed smoke and flames coming from the house, Lambert rushed to a window and succeeded with another rescuer in removing a man and two children from the burning house. Upon learning that there was a third child still unaccounted for, Lambert re-entered the smoke-filled home alone and carried the child to safety.

★ NUNEZ, Carl K., ADAN, USNR, for heroic conduct on the night of 9 Jan 1960 while serving with NRA VP 774. As a member of the regular flight crew of a patrol plane he participated in a routine training flight from U.S. Naval Air Station Los Alamitos. When both engines failed, necessitating a power-off, night-ditching at sea, Nunez, despite five-foot breaking waves, succeeded in keeping one of the injured crew members afloat for more than an hour until the arrival of the rescue helicopter. Despite extreme exhaustion, he made a valiant but unsuccessful effort to hold the injured man while being hoisted from the water by helicopter.

Deep Freeze 61



What's going on down in the Antarctic and at the South Pole? A quick look at the information on this and the following pages will show that the United States and the U.S. Navy have been pretty busy there. And there are big plans for the future too, as shown in this report on Deep Freeze 1961.

OIL HEAT may be great around your house, but in Antarctica it means a lot of work and expense because every drop must be imported—by sea or by air.

Heat, power and light at some Antarctic stations will be provided by atomic reactors. Work on a new power plant at McMurdo Sound will begin during this Deep Freeze year, 1961. It should be operating by the spring of 1962. Navy and Atomic Energy Commission experts believe that the difference in cost will enable the reactors to pay for themselves within two and one-half to five years of operation.

All buildings at the stations will be heated electrically. This is most important in the extreme cold of Antarctica because there will no longer be a need for large quantities of air for combustion, and no fumes or gas to be dispersed. Fire hazards and heat losses will therefore be less.

Another project to be undertaken by Deep Freeze 61 men is the penetration of the Amundsen Sea. The ice-breakers *USS Glacier* (AGB 4) and *Staten Island* (AGB 5) will attempt to enter the ice-filled body of water in January 1961. The two-ship task group will be under the command of Captain Edwin A. McDonald, USN, a veteran of six Arctic and five Antarctic expedi-

tions. The Amundsen Sea coast is among the last remaining unexplored parts of the Antarctic continent. So far, the rugged ice pack in this sea has refused to allow a ship to reach the coastline.

ANOTHER UNDERTAKING by Deep Freeze 61 explorers will be an 800-mile trek by tractor train from Byrd Station to South Pole Station. Ten men will attempt the crossing. The trail will be marked every fifth of a mile with 12-foot bamboo poles. The Navy explorers will also establish geographical fixes in the Horlick Mountains for mapping purposes. Besides these missions, the tractors are needed at the South Pole for further construction.

Rear Admiral David M. Tyree, USN, Commander Naval Support Force, Antarctica, reports that these projects are in addition to the Task Force's regular job of resupplying the year-round scientific stations with new men and supplies.

In addition to the Navy forces in Antarctica, Admiral Tyree commands elements of the Coast Guard, Military Sea Transport Service, Army and Marine Corps assigned to the expedition. In all, he has nine ships, over 30 aircraft and some 3000 men assigned to Deep Freeze 61.

THE UNITED STATES is currently operating and maintaining three stations in the Antarctic and is working closely with New Zealand in the operation of another. Also, under agreements made with Australia and Argentina, the United States is continuing scientific pro-



SAFETY DEVICE—Sno Cat, equipped with crevasse detection gear, is used to feel the way across Antarctica.

grams at two other locations, the Wilkes Station and in the Weddell Sea.

These stations are:

- **South Pole Station**—Located at the geographical pole, this station is built on a plateau almost 10,000 feet above sea level.

- **Naval Air Facility, McMurdo Sound**—Located on the west coast of the Ross Sea, McMurdo is the principal sea and aerial cargo staging base for Antarctic operations as well as a scientific station. It is the Antarctic headquarters of Admiral Tyree and the headquarters of U.S. scientific efforts in Antarctica. A new atomic power station will be started there during this Antarctic summer.

- **Byrd Station**—This station is in the heart of Marie Byrd Land, 80 degrees south latitude, and 120 degrees west longitude. This base will be almost completely rebuilt under the snow. Construction starts this year.

- **Hallett Station**—The United States and New Zealand jointly operate this scientific research center which is located on Cape Hallett in the Ross Sea.

- **Ellsworth Station**—Although the custody of the equipment and facilities at this station were transferred to Argentina for operational and logistic support in February 1959, scientific research is still conducted by both countries.

- **Wilkes Station**—Custody of equipment and facilities at this station was transferred to Australia in February 1959 for operational and logistic support. Australia and the United States conduct joint scientific research there.

In addition to these already established stations in Antarctica, two auxiliary air support facilities—manned by naval personnel—will be reopened this year at Beardmore Glacier (*Naval Auxiliary Air Facility, Beardmore*) and at the halfway point between Naval Air Facility, McMurdo and Byrd Station (*Naval Auxiliary Air Facility, Little Rockford*).

THE DEEP FREEZE 60 wintering-over party at these stations was made up of 198 Americans. Nineteen were at Pole Station; 21 at Byrd Station; 14 at Hallett; 138 at NAF McMurdo Sound; one U.S. geophysicist at the Russian Mirny Station; one meteorologist at Ellsworth; and four U.S. scientists at Wilkes. Thirty-seven of these persons were civilian scientists and the remainder were Navy officers and enlisted men.

Many of these men have already been flown to New Zealand en route to the United States or to new duty

stations. An eager new group, however, is moving onto the continent with a full summer's work waiting for them. Some of these new men will work only during the Antarctic summer and then return home, while many of them will remain as the Deep Freeze 61 wintering-over party.

Other construction projects for McMurdo include the completion of a communications center, the erection of a transmitter building and construction of three new snow roadways.

At Byrd Station an entire new under-snow camp will be started. Eventually, all buildings and facilities at Byrd will be housed beneath the snow in tunnels. Besides providing protection against the severe weather, these under-snow buildings cannot be damaged by the accumulation of snow which has wrecked nearly all the buildings now on the snow surface. When complete, the station will contain about 15 buildings, a scheduled nuclear power plant, all essential utilities, scientific laboratories and housing for 40 men.

BEFORE SOME OF THIS construction work can be done, supplies and equipment must be imported. *uss Edisto* (AGB2), *uss Glacier* (AGB 4), and *usccc-Eastwind* (WAGB 279) were expected around the fifth of December to break a path for cargo ships scheduled to arrive with these supplies and equipment in late December and early January.

These three icebreakers make up only one-third of the ships assigned to *Deep Freeze 61*. The other ships (which were scheduled to leave their operating areas from October through December) have already started to arrive in the Antarctic area.

uss Staten Island (AGB 5) left Seattle, Wash., in October and visited San Diego, Calif.; Portland and Melbourne, Australia; and Port Lyttelton, N.Z., before beginning oceanographic work in the Ross Sea early in December.

The only Navy manned cargo ship assigned to *Deep Freeze* this year, *uss Arneb* (AKA 56), is returning for her sixth straight year. This Atlantic Amphibious Force ship will leave Davisville, R.I., pass through the Panama Canal, make a stop at New Zealand and then follow an icebreaker to Cape Hallett. She is scheduled to arrive there in February 1961.

The Military Sea Transport Service has assigned two transports to *Deep Freeze 61*. *usxs Private John R. Toule* (TAK 240) left Davisville, R.I., in November and should arrive at McMurdo late in December. *usxs Greenville Victory* (TAK 237) is also scheduled to

AIRPORT LIMOUSINE—An AirDevRon Six plane is met by NAF's Survival Dog Team on arrival at McMurdo.





HAZARDOUS DUTY—A rescue party member peers into a trench dug to reach a Sno Cat that broke through surface.

leave from Davisville, but not until Towle has already arrived in the Antarctic area. *Greenville Victory* is scheduled to depart Davisville on 22 December and arrive at McMurdo late in January.

The tanker USNS *Alatna* (TAOG 81), also provided by MSTC, left Norfolk, Va., in late November and is scheduled to arrive at McMurdo in early January. After depositing her liquid cargo at McMurdo, this AO will return to Port Lyttelton, N.Z., twice more for additional fuel for McMurdo.

USS *Wilhoite* (DER 397), the only combatant-type ship attached to Deep Freeze 61, went to the Antarctic from her home base at Pearl Harbor. *Wilhoite* is the first Pacific Fleet DER ever assigned to a Deep Freeze Operation.

WHILE IN THE ANTARCTIC AREA, *Wilhoite* will operate from Dunedin, N.Z., as an ocean-station weather ship. Her principal responsibility will be to provide weather information for pilots of Air Development Squadron Six and the USAF 9th Troop Carrier Squadron who fly between Christchurch, N.Z., and McMurdo Sound.

The first of these planes arrived in New Zealand in September and began to airlift personnel and cargo to the various Antarctic stations. Some planes of these squadrons also make reconnaissance flights and perform photographic missions.

The following planes operate under the control of VX6:

- Four C130BL, ski-equipped, *Hercules*
- Three P2V-7, ski-equipped, *Neptunes*
- Three R4D-8, ski-equipped, *Skytrains*
- One R4D-5, ski-equipped, *Skytrain*
- Five UC-1, ski-equipped, *Otters*
- One R7V-1, wheel-equipped, *Super Constellation*
- One R5D-3, wheel-equipped, *Skymaster*
- Four HUS-1A, *helicopters*

In addition to these planes, six helicopters from Helicopter Utility Squadron Four, Naval Air Station, Lakehurst, N.J., and two helicopters from Helicopter Utility Squadron One, Naval Air Station, San Diego, Calif., are being carried aboard the icebreakers for sea, ice and scientific reconnaissance.

The Military Air Transport Service's Ninth Troop Carrier Squadron (heavy) has seven C124 *Globemaster* aircraft which are available for routine airlifts to Antarctic bases besides making airdrops of supplies and equipment that may be needed either as a routine resupply mission or in emergency situations. Before the

C124s complete their operation in early December, they will have airlifted some 1000 tons of high priority cargo to Pole and Byrd Stations.

THIS IS THE FIRST YEAR the Navy has had the ski-equipped C130 *Hercules* airplane available for operational flying in the Antarctic. Last year, with the support of the Air Force, seven *Hercules* were not only tested in Antarctica, but also successfully used to move material and men to the South Pole and Byrd Station. Through the use of this plane, the Navy intends to improve its support and resupply of inland stations in future *Deep Freeze* operations.

Hercules, which will ski-land at some inland stations, can land on snow as well as on ice runways. The use of the plane is expected to save the United States hundreds of thousands of dollars in parachutes alone and also eliminate the damage previously experienced in parachute dropping. Capable of hauling 10 tons at about 350 mph, *Hercules* will eventually replace the present R4D cargo planes. The R4D carries two tons at 160 mph.

Other planes, some of which have already logged many hours of hazardous Antarctic flying, range from the Navy's ski-equipped UC-1 *Otters* to the MATS giant C124 *Globemasters*.

New Zealand-based aircraft of Air Development Squadron Six and MATS' Ninth Troop Carrier Squadron began flying from Christchurch to the McMurdo ice strip about 1 October. The ice runways should remain in good condition until early in December.

Although much is said about the military support of the men on Antarctica, the reason behind the entire operation is scientific research. In fact, a recent agreement between 12 nations has outlawed military operations on any part of the continent.

The U.S. scientific program in Antarctica is administered by the National Science Foundation. On several of the projects NSF relies strongly on Navy development work and close operational support. Navy personnel and scientists work together to further U.S. scientific research in this cold south.

Personnel of the Navy Weather Service meteorological program have a continuing research program. They take upper air balloon soundings at NAF McMurdo; operate automatic weather stations, and experiment with different communications methods.

BRIGHT LIGHTS illuminate downtown area at NAF McMurdo Sound, during long night of an Antarctic winter.





THIS CHAPEL is named Our Lady of the Snows, after a church in Rome. Peak in background is Observation Hill.

This is the sixth consecutive year that the U.S. Navy has operated in the Antarctic and both *uss Glacier* (AGB 4) and *Arneb* (AKA 56) have been along for every trip. For *Staten Island*, *Edisto*, *Eastwind*, *Green-ville Victory*, *John R. Toule*, and *Alatna*, it's their third tour of duty in the Antarctic, while *uss Wilhoite* is making her maiden voyage to Antarctic waters.

What do you know about the world's least known continent? Not very much, if you're like the rest of us. These are some of the pointers that Navy men have gathered together about life in the Antarctic.

MOST AIRPLANE ACCIDENTS during Deep Freeze operations are caused by a polar phenomenon commonly known as a whiteout.

A whiteout is a condition in which shadows and horizon disappear; normal depth perception is lost; and all light is even. To a man caught in a whiteout everything appears to be suspended in space — sky and land have the same greyish-white appearance.

Whiteouts happen when there is a fairly low, but even, cloud cover over a snow- or ice-covered surface. The sun's rays bounce between clouds, diffuse the light, and eliminate all shadows and ridges on the surface. The general scene is one of uniform greyness. A whiteout is not, as some believe, fog or blowing snow.

Although the cause of a whiteout is known, the condition cannot be forecast. For that reason, flying in Antarctica is dangerous. Also, there are few ground navigational aids to help pilots find their way. U.S. aircraft are forbidden to take off during a whiteout, but they have been caught in flight by this freakish weather. Aviators liken it to flying in a bowl of milk.

Pilots are not the only men troubled by whiteouts. Objects on the ground lose their proper perspective. Men have even walked into buildings after failing to judge distances correctly. Also, a man may look at his feet, see them, but still be unable to tell what he is standing on.

MOST NAVYMEN PROBABLY think of Antarctica as a great white chunk of ice with penguins sprinkled along the coastline.

And, on the surface, they may be right. The continent itself supports almost no wildlife. A few strange insects

exist there, and some forms of mosses and lichens can be found, but almost nothing else. Although in some areas coarse grasses can be found, the rocky mountains are generally bare.

The seas surrounding Antarctica, however, are almost the exact opposite. Scientists have estimated that one acre of Antarctic sea water contains more food and life than one acre of land or water found any place else in the world. Some of the types of life found in Antarctica live on the continent or the pack ice, but they are dependent on the sea for their food.

Perhaps the most interesting and amusing creatures found in Antarctica, however, are the penguins. The two best known varieties of Antarctic penguins are the Emperor and the Adelie.

THE EMPEROR is the dignified host of the southern continent. These stately creatures waddle around paying little attention to anything.

The Adelies, on the other hand, are the clowns of the Antarctic. They play in the water, and they are always curious about anything man does. Adelies grow to a height of about 14 inches, while the Emperors are about three or four feet tall.

Both of these species get their food from the water. They feed on small fish, shrimp and plankton. Plankton is made up of sea life so small that it must be viewed under a microscope before individual specimens of it can be seen. Yet it is so plentiful that it often stains sea ice green.

Seals are also plentiful in the waters of Antarctica. At one time these mammals were hunted quite extensively for their pelts. The leopard seal lives mainly on fish, but will eat penguins where possible. Other varieties of seals to be found are the Ross seal and the Weddell seal.

THE LARGEST ANIMAL in the area is the blue whale. This warm-blooded animal sometimes grows to a length of 90 feet and weighs as much as 150 tons.

A cousin of the whale is the porpoise. One type of Antarctic dolphin has been named the killer whale. These animals are among the most savage of all beasts. They hunt in packs and will attack even the great blue whale. When they see a man or a seal or bird on the ice, they dive deep under the ice, and have been known to break ice three feet thick to dump their prey into the water. So far as is known, however, no man has been eaten by a killer whale.

The skua gull, which has been seen on the icecap within a few miles of the South Pole, is the scavenger of Antarctica. These birds feed not only on fish, but also on penguin chicks and eggs. If garbage is thrown over the side of a ship the skua gull is always there to rummage through it.

Most of the animals and birds found in Antarctica do not live on the continent all year around. Penguins and seals move north to the edge of the pack ice as winter approaches. The Emperor penguins lay their eggs during the winter night, and they carry the egg, and later the chick, with them on their webbed feet beneath a roll of soft fat.

The Adelie penguin migrates north for the winter, but returns to Antarctica in the summer.

HERE ARE A FEW more facts that may intrigue you, gathered together by Capt. E. A. McDonald, USN,



ADELIE PENGUINS are known as the clowns of the Antarctic. They seem to be curious about everything they see.

Deputy Commander, Task Force 43:

- Antarctica is the fifth largest continent with 5,100,000 square miles of territory. It is about the same size as the United States and Mexico together. It also has an average altitude of 6000 feet, which makes it the world's highest continent.

- People may have lived in the Antarctic many years ago. In 1893, a Norwegian sealer found on Seymour Island about 50 clay balls perched on pillars of the same material. "These," he reported, "had the appearance of having been made by human hands."

- Antarctica once had a temperate or semi-tropical climate. Numerous tropical ferns and plant life have been found imbedded in rock on Palmer Peninsula and in the coal seams in the Upper Beacon Sandstone of the Beardmore Glacier some 300 miles from the South Pole.

- The existence of Antarctica as a continent was not known until the middle of the 19th century, when LT (later Rear Admiral) Charles Wilkes, USN, sailed halfway around it. The many landfalls seen by this expedition first determined the continental dimensions of Antarctica.

- Objects hundreds of miles away sometimes may be seen clearly by the naked eye in the Antarctic. This peculiarity, known as looming, may have been responsible for a portion of sightings by early Antarctic explorers. It is brought about by an atmospheric condition which meteorologists term an inversion: warmer layers of air exist above colder ones and cause light rays from the object to the eye to be curved concavely downward toward the earth's surface.

- There are no polar bears or land animals in the Antarctic. Killer whales and leopard seals are the big villains in waters surrounding Antarctica. As a result, penguins and seals find haven on the sea-ice.

- Because of the earth's centrifugal force, 5000 tons of cargo loaded on a ship in the vicinity of the equator would weigh about 25 tons more at the pole.

- The intense cold and sterility of Antarctic air preserves food and materials almost indefinitely. As an example, corned beef, canned beans, and sugar cached by the Swedish explorer, Nordenskjöld, provided a most satisfactory meal for a British survey party 45 years later. The print on a magazine, too, was as readable as ever.

- They mine for water at the South Pole. Since the only water available is that which can be melted from snow, and low temperatures frequently prevent sustained activity outside, water for a station at the South Pole is obtained from germ-free snow blocks dug from a snow

mine which can be reached directly from the station living quarters.

- During Deep Freeze III in 1957, an airfield in McMurdo Sound was repaired with a mixture of snow, ice, and water. During a midsummer hot spell, the ice runway began to melt in areas where waste and oil had collected. Refreezing was done by filling the chuckholes with the mixture and allowing the colder evening temperatures to do the work.

- Owing to the earth's rotation, ice drifts to the left of the wind in the Antarctic, whereas it drifts to the right in the northern hemisphere. Likewise, persons who have become lost find they invariably circle to the left in the Antarctic and to the right in the Arctic.

- The round, barrel-hulls of the Navy icebreakers prevent them from becoming crushed in Antarctic ice. This peculiar construction enables them to pop up if pressure reaches dangerous proportions. Shackleton's *Endurance* was crushed and lost in the Weddell Sea in 1915 because the ice was able to exert force and pressure on her hull and timbers.

- Rear Admiral Richard E. Byrd, the late polar explorer, was not only the first to fly over the South Pole, but was the first to live alone in the Antarctic. For five long, weary months, often ill from fumes from a stove, he lived in a small snow-covered hut, carefully taking weather and temperature observations ranging to about 80 degrees below zero.

- The mammoth, rubber-tired *Snow-Cruiser*, transported to Antarctica on Rear Admiral Byrd's 1939-41 expedition, was one of the most interesting vehicles ever designed for polar travel. Its wheels could be raised into compartments inside so that it was able to slide down ridges on its belly runners. It even carried a small plane on its roof. Besides living quarters for four men, it contained a machine shop, laboratories, and photographic and long-range radio facilities. Originally scheduled for the long overland snow trip to the South Pole and return, its power proved wholly inadequate and it never left Little America.

- In spite of its being a land of ice and snow, the Antarctic continent is the home of a large, active volcano. Mount Erebus, which is 13,000 feet high, is on Ross Island in the McMurdo Sound area.

- The coldest temperature ever recorded was 124 degrees F. below zero at the Russian Sovietskaya base in the interior of Antarctica, in September 1959. The coldest recording at a U.S. station was at the South Pole also in 1959. It was minus 110 degrees F.

TRAILBREAKER—USS *Glacier* (AGB 4) has her work cut out for her as pathmaker for cargo ships in Antarctica.



DECEMBER 1960

TAFFRAIL TALK

CHIEF STEWARD Ramon G. Cabalona of the Pacific Fleet guppy submarine USS *Catfish* (SS 339) is \$1000 richer these days—and all because he baked better pie than 99 women could.

The prospect of competing with 99 grimly determined female culinary artists should be enough to make most strong men think twice, but not so Chief Cabalona. Armed with his recipe for "Sub Meringue" pie, and bolstered by the confidence built upon the long and loud praises of his well-fed shipmates, the Chief flew off to Washington, D.C., as one of 100 finalists in the annual National Bake-off Contest.

Contestants were lined up at 100 sparkling new stoves, and, within a given time limit, were expected to create and bake their favorite recipe. Chief Cabalona didn't win the \$25,000 grand prize—one of the distaff entrants grabbed that off with something called "Dilly Casserole Bread"—but the judges proclaimed his effort "the only pie entered worthy of a prize."

Catfish crew members weren't the least bit surprised at the news of their popular head cook's triumph. Sub Meringue pie, an orange-flavored, cream concoction, has been a big hit aboard the San Diego-based submarine for a long time now.

★ ★ ★

The Old Navy was never like this. A physicist in the Research Department at the U.S. Naval Ordnance Test Station, China Lake, E. W. Price, who is considered to be one of the nation's top authorities on rocket combustion, thinks he has found the answer to many of our rocket failures. Too much noise, he says. Sound waves created within the rocket cause irregularities in the propellant combustion. The sound waves, interacting within the rocket flame, set off a chain reaction which leads to either explosion of the motor case or violent vibrations in the rest of the missile, which cause failure in the guidance and control system.

★ ★ ★

Not too long ago, we had a few terse, well-chosen words to offer on the subject of "terabucks," "gigadollars," and "megapounds." We now have a further contribution to make to the growth of our contemporary language—the ganzfeld.

It's at the opposite end of the quantitative spectrum of terabucks and the like, which were words coined to handle sums beyond the normal language. A ganzfeld, on the other hand, is strictly a nothing.

As whipped up from a minimum of materials by the Office of Naval Research, ganzfeld describes the phenomenon of looking into a visual field where there is, literally, nothing to see. This weird situation—which cannot be reproduced by merely closing your eyes or entering a dark room—is sometimes encountered by pilots at very high altitudes. In every direction there is just nothing. Then all sorts of phantoms begin to appear. These are projections out of one's own mind which, nevertheless, seem quite real.

As yet, and as might be expected, very few people have seen a ganzfeld, but those who have claim that it isn't quite the same as the whiteout of the Antarctic. The whiteout is a white nothingness, but a ganzfeld isn't even white.

Any day now, we expect to hear of a boot being sent to the Supply Office for a gross of ganzfelds. Ah, the progress of science!

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us. Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keystones of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

ALL HANDS

The Bureau of Naval Personnel Information Bulletin, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Use of funds for printing of this publication is approved by the Director of the Bureau of the Budget 25 June 1958. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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The Bureau should be kept informed of changes in the number of copies required.

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• **AT RIGHT: FOLLOW THE LEADER—**
Destroyer USS *Brown* (DD 546) maneuvers in the wake of attack carrier USS *Oriskany* (CVA 34) while simulating refueling at sea at speeds in excess of 25 knots.

ALL HANDS

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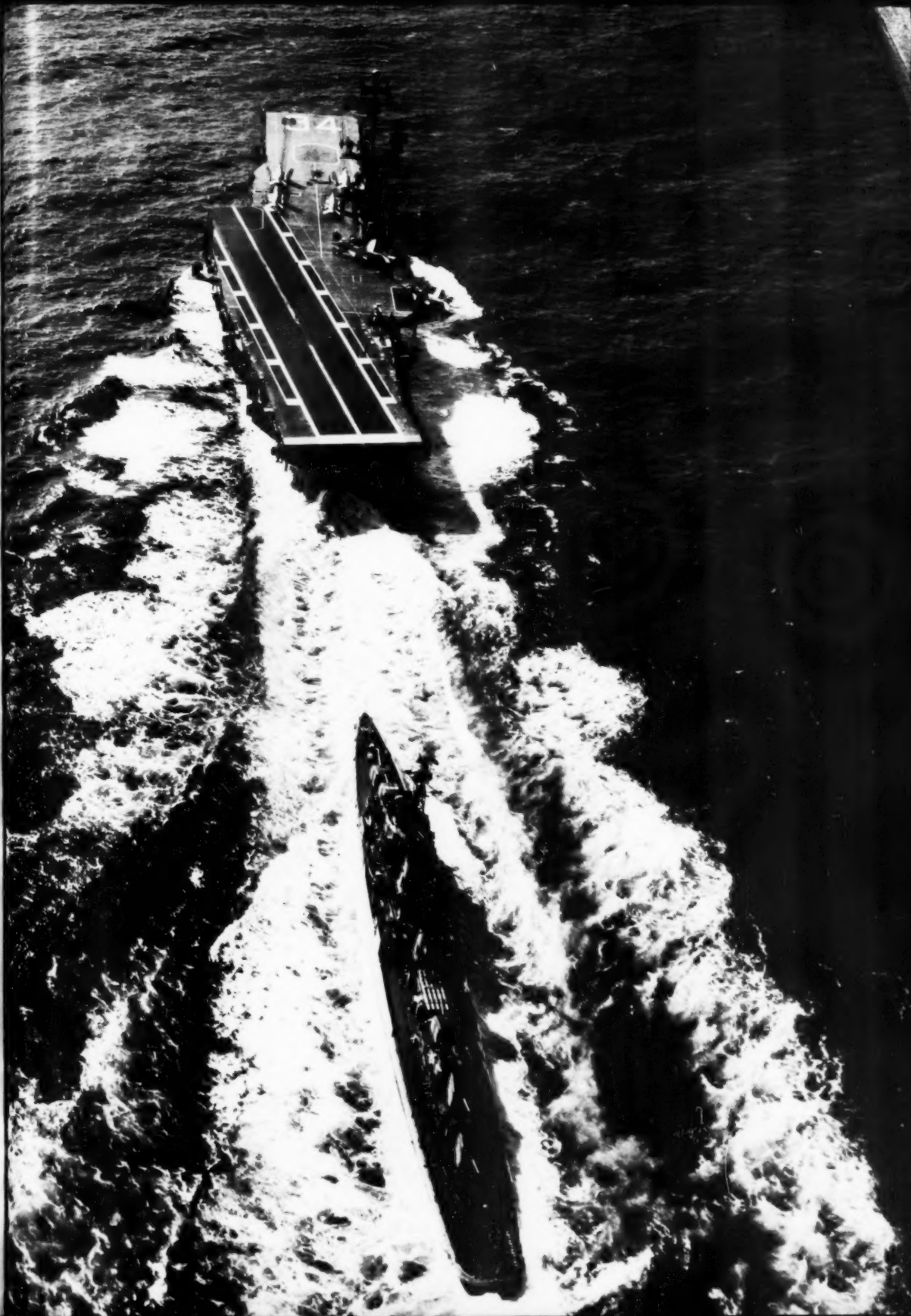
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Antarctica 1960



FROM POLE TO POLE
MEN OF GOODWILL



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